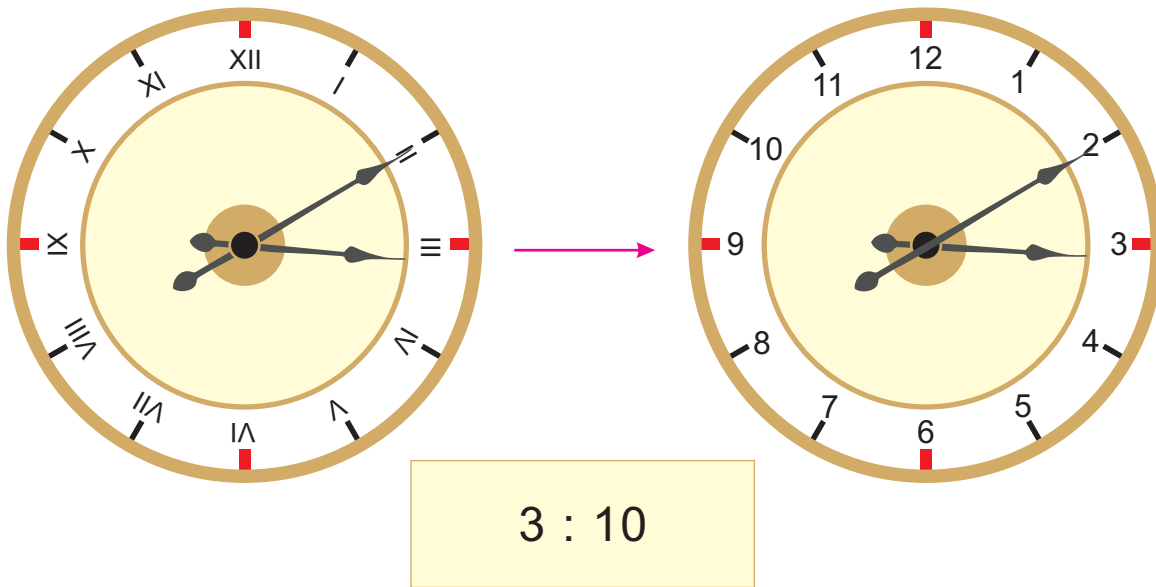


Unit 1: Whole Numbers

Learning Check 1.1

1. Write Arabic numerals in the clock in place of Roman numerals. Also write the time shown.



2. Write the Arabic numerals of these Roman numerals.

- | | | | | | |
|--------|----|-------|----|---------|---|
| a) IV | 4 | b) XI | 11 | c) VIII | 8 |
| d) XIX | 19 | e) X | 10 | f) V | 5 |

3. Write the Roman numerals of these Arabic numerals.

- | | | | | | |
|-------|------|------|----|-------|------|
| a) 5 | V | b) 2 | II | c) 13 | XIII |
| d) 17 | XVII | e) 6 | VI | f) 20 | XX |

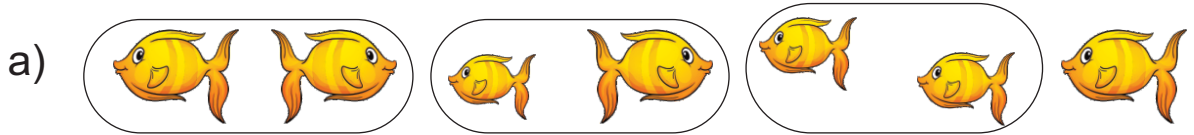
4. Write the Roman numerals in sequence from I to XX.

I , II , III , IV , V , VI , VII , VIII , IX , X

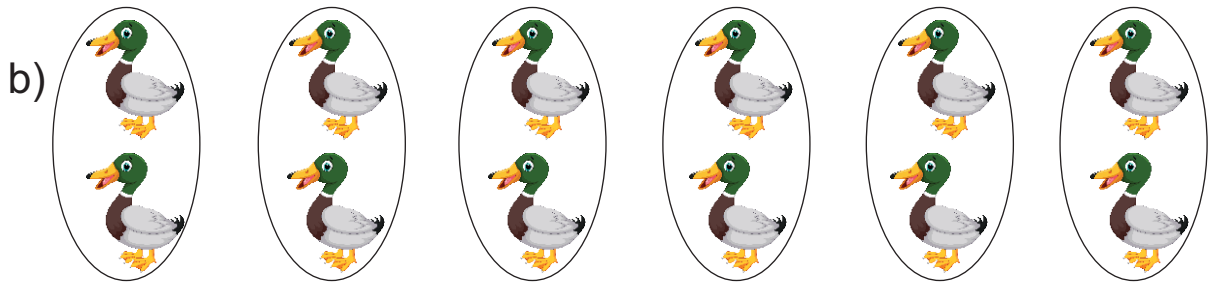
XI , XII , XIII , XIV , XV , XVI , XVII , XVIII , XIX , XX

Learning Check 1.2

1. Divide the objects into pairs and write “even” or “odd” in the given boxes.



Odd



Even

2. Write all the even and odd numbers between 31 and 72.

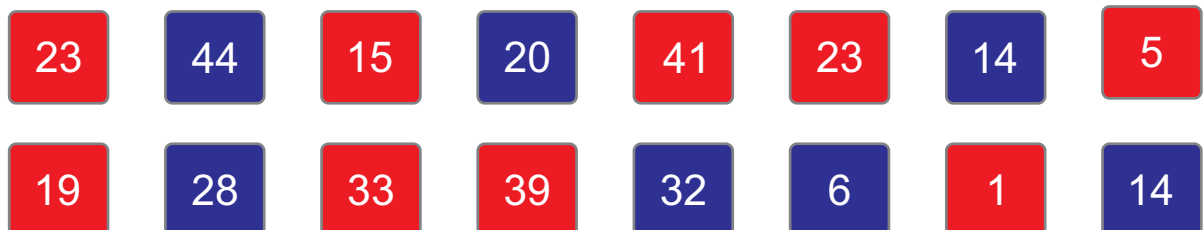
Even numbers

32, 34, 36, 38, 40
42, 44, 46, 48, 50
52, 54, 56, 58, 60
62, 64, 66, 68, 70

Odd numbers

33, 35, 37, 39, 41,
43, 45, 47, 49, 51
53, 55, 57, 59, 61
63, 65, 67, 69, 71

3. Colour the squares having odd numbers red and even numbers blue.



Learning Check 1.3

1. Look at the number disks and write the numbers.

a)



27025

b)



68952

2. Write the numbers for these number names.

- a) Twenty-one thousand, three hundred and twenty-two 21,322.
- b) Six thousand, five hundred and seventy-nine 6579.
- c) Ninety-two thousand, one hundred and thirty-six 92,136.
- d) Fifty-two thousand and twenty 52,020.
- e) Eighty-five thousand and eight 85,008.
- f) Eighteen thousand, five hundred and sixty-one 18,561.

3. Write the number names for these numbers.

- a) 34,561 Thirty-four thousand, five hundred and sixty-one
- b) 12,321 twelve thousand, three hundred and twenty-one
- c) 67,381 sixty-seven thousand, eight hundred and eighty-one
- d) 94,807 Ninety-four thousand, eight hundred and seven
- e) 57,689 fifty-seven thousand, six hundred and eighty-nine

4. Look at the numbers and fill in the blanks.

a) 84,573

The digit 8 is in the ten thousands place, its value is 80,000 .

The digit 4 is in the thousands place, its value is 4000 .

The digit 5 is in the hundreds place, its value is 500 .

The digit 7 is in the tens place, its value is 70 .

The digit 3 is in the ones place, its value is 3 .

b) 29,065

The digit 2 is in the ten thousands place, its value is 20,000 .

The digit 9 is in the thousands place, its value is 9000 .

The digit 0 is in the hundreds place, its value is 000 .

The digit 6 is in the tens place, its value is 60 .

The digit 5 is in the ones place, its value is 5 .

c) 70,896

The digit 7 is in the ten thousands place, its value is 70,000 .

The digit 0 is in the thousands place, its value is 0000 .

The digit 8 is in the hundreds place, its value is 800 .

The digit 9 is in the tens place, its value is 90 .

The digit 6 is in the ones place, its value is 6 .

5. Write the value of the underlined digits.

a) 34,567: 30,000

b) 12,345: 40

c) 23,336: 6

d) 78,678: 8000

e) 89,076: 000

f) 98,968: 90,000

6. Write the expanded form of the following.

a) 67,213 : 60,000 + 7000 + 200 + 10 + 3

b) 82,305 : 80,000 + 2000 + 300 + 00 + 5

c) $22,568 : 20,000 + 2000 + 500 + 60 + 8$

d) $12,382 : 10,000 + 2000 + 300 + 80 + 2$

e) $78,200 : 70,000 + 8000 + 200 + 00 + 0$

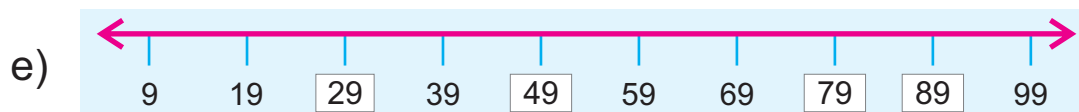
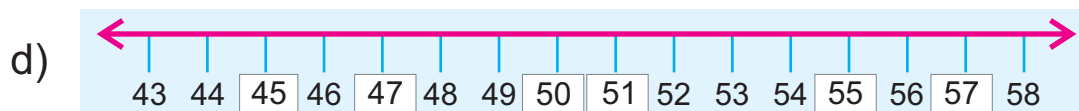
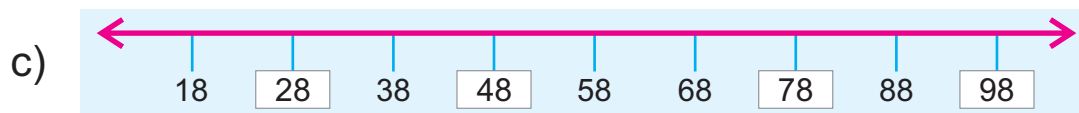
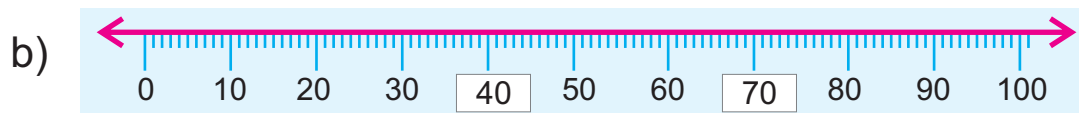
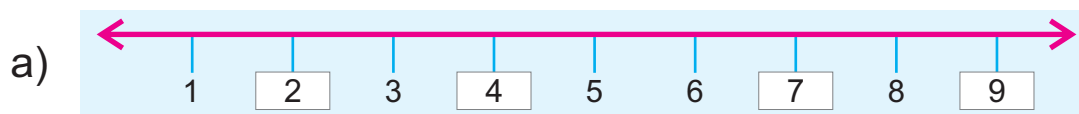
f) $10,924 : 10,000 + 0000 + 900 + 20 + 4$

g) $14,232 : 10,000 + 4000 + 200 + 30 + 2$

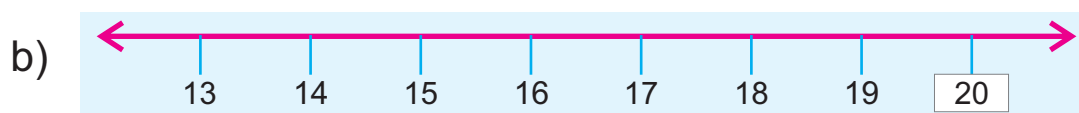
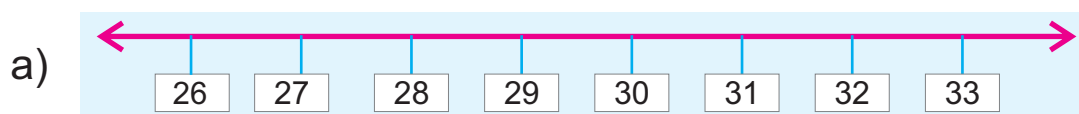
h) $78,654 : 70,000 + 8000 + 600 + 50 + 4$

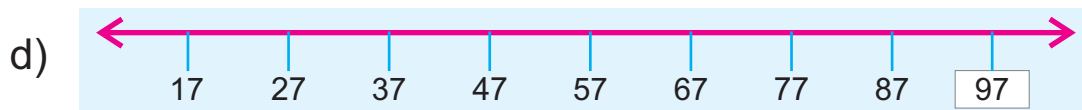
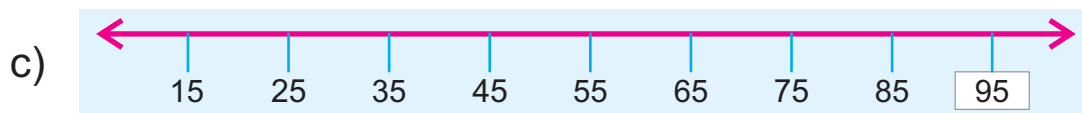
Learning Check 1.4

1. Write the missing numbers on the number lines.



2. Represent the following numbers on a number line.





Learning Check 1.5

3. Write $<$, $>$ or $=$ in the given boxes.

a) 567 970 5 hundreds are smaller than 9 hundreds.

b) 123 132 hundreds digits are same 3 tens are greater than 2 tens.

c) 607 607 hundreds tens and ones digits are same.

d) 225 252 hundreds digits are same, 2 tens are smaller than 5 tens.

4. Write these numbers in ascending and descending order.

a) 897, 678, 412, 654

Ascending order: 412, 654, 678, 897

Descending order: 897, 678, 654, 412

b) 520, 528, 543, 531

Ascending order: 520, 528, 531, 543

Descending order: 543, 531, 528, 520

c) 908, 786, 342, 998,

Ascending order: 342, 786, 908, 998

Descending order: 998, 908, 786, 342

Learning Check 1.6

1. Round off the given numbers in the table below to the nearest 10 and 100.

	Numbers	Nearest 10	Nearest 100
a)	245	Given number is 245 The digit at the ones place is 5. So, the ones place digit will be replaced by 0 and tens place digit is increased by 1. So, 245 rounded off to the nearest 10 is 250.	Given number is 245 The digit at the tens place is 4 which is less than 5. So, the ones and tens place digits will be replaced by 0 and hundreds place digit will remain the same. So, 245 rounded off to the nearest 100 is 200.
b)	4567	Given number is 4567 The digit at the ones place is 7, which is greater than 5. So, the ones place digit will be replaced by 0 and tens place digit is increased by 1. So, 4567 rounded off to the nearest 10 is 4570.	Given number is 4567 The digit at the tens place is 6 which is greater than 5. So, the ones and tens place digits will be replaced by 0 and hundreds place digit is increased by 1. So, 4567 rounded off to the nearest 100 is 4600.

c)	9856	Given number is 9856 The digit at the ones place is 6, which is greater than 5. So, the ones place digit will be replaced by 0 and tens place digit is increased by 1. So, 9856 rounded off to the nearest 10 is 9860.	Given number is 9856 The digit at the tens place is 5. So, the ones and tens place digits will be replaced by 0 and hundreds place digit is increased by 1. So, 9856 rounded off to the nearest 100 is 9900.
d)	7755	Given number is 7755 The digit at the ones place is 5. So, the ones place digit will be replaced by 0 and tens place digit is increased by 1. So, 7755 rounded off to the nearest 10 is 7760.	Given number is 7755 The digit at the tens place is 5. So, the ones and tens place digits will be replaced by 0 and hundreds place digit is increased by 1. So, 7755 rounded off to the nearest 100 is 7800.
e)	67,543	Given number is 67543 The digit at the ones place is 3 which is less than 5. So, the ones place digit will be replaced by 0 and tens place digit will remain same. So, 67543 rounded off to the nearest 10 is 67540.	Given number is 67543 The digit at the tens place is 4 which is less than 5. So, the ones and tens place digits will be replaced by 0 and hundreds place digit will remain the same. So, 67543 rounded off to the nearest 100 is 67500.

Unit Check 1

1. Encircle the correct options.

- a) There is no symbol to represent _____ in Roman numerals.
i) 0 ii) 1 iii) 10 iv) 100
- b) The even numbers are the numbers that are divisible by:
i) 2 ii) 0 iii) 5 iv) 10
- c) _____ is the smallest 5-digit number.
i) 1000 ii) 90,000 iii) 10,000 iv) 12,000
- d) To compare 3-digit numbers, first compare the _____.
i) tens ii) ones iii) hundreds iv) zero
- e) _____ means making a number easier to work with but keeping its estimated value close to the original.
i) Comparing ii) Ordering
iii) Rounding off iv) Place value

2. Write the value of the underlined digits.

- a) 34,569: $4 \times 1000 = 4000$
- b) 18,344: $1 \times 10000 = 10000$
- c) 14,871: $8 \times 100 = 800$
- d) 56,566: $6 \times 1 = 6$
- e) 94,798: $9 \times 10000 = 90000$
- f) 62,981: $2 \times 1000 = 2000$
- g) 57,721: $7 \times 100 = 700$
- h) 73,419: $1 \times 10 = 10$

3. Write the expanded form of the following. Also tell the value of each digit.

- a) 45,362 : $40000 + 5000 + 300 + 60 + 2$
- b) 12,514 : $10000 + 2000 + 500 + 10 + 4$

- c) 46,761 : $40000 + 6000 + 700 + 60 + 1$
- d) 98,345 : $90000 + 8000 + 300 + 40 + 5$
- e) 17,753 : $10000 + 7000 + 700 + 50 + 3$
- f) 82,145 : $80000 + 2000 + 100 + 40 + 5$
- g) 54,131 : $50000 + 4000 + 100 + 30 + 1$
- h) 76,959 : $70000 + 6000 + 900 + 50 + 9$

4. Write the following in words.

- a) 72,392 Seventy-two thousand three hundred and ninety-two
- b) 12,324 Twelve thousand three hundred and twenty-four
- c) 98,989 Ninety-eight thousand, nine hundred and eighty-nine
- d) 12,786 Twelve thousand seven hundred and eighty-six
- e) 91,455 Ninety-one thousand four hundred and fifty-five
- f) 76,450 Seventy-six thousand four hundred and fifty
- g) 65,214 Sixty-five thousand two hundred and fourteen
- h) 43,300 Forty-three thousand and three hundred

5. Write the following in numerals.

- a) Twenty-four thousand, six hundred and twenty-one 24,621
- b) Sixty-two thousand, one hundred and one 62,101
- c) Ten thousand, eight hundred and eleven 10, 811
- d) Thirty-three thousand, nine hundred 33,900
- e) Seventy-two thousand, one hundred and twelve 72, 112

6. Look at the number and fill in the blanks.

96148

The digit 9 is in the ten thousands place, its value is 90000.

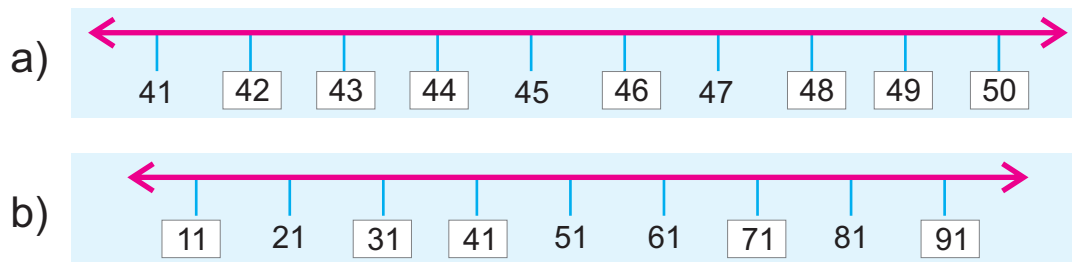
The digit 6 is in the thousands place, its value is 6000 .

The digit 1 is in the hundreds place, its value is 100 .

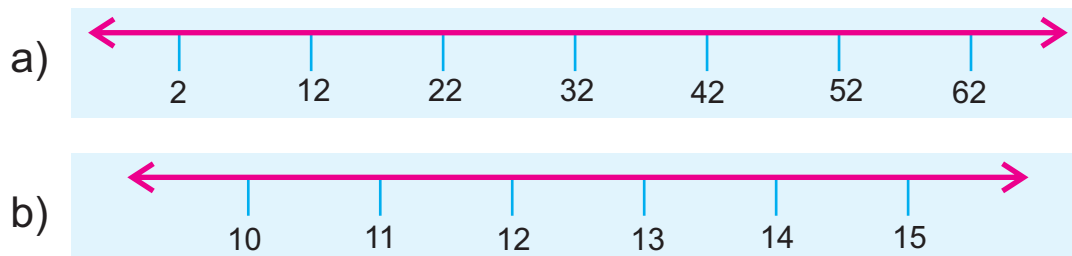
The digit 4 is in the tens place, its value is 40 .

The digit 8 is in the ones place, its value is 8 .

7. Write the missing numbers on the number lines.



8. Represent the following numbers on a number line.



9. Compare and write $<$, $>$ or $=$ in the blanks.

Hundreds digits are same
6 tens are greater than 2 tens

a) $562 > 526$

2 hundreds are greater than 1
hundreds

b) $102 < 214$

9 hundreds are greater than
8 hundreds

c) $988 > 889$

7 hundreds are greater than
6 hundreds

d) $654 < 754$

All digits are same

e) $134 = 134$

5 hundreds are greater than
4 hundreds

f) $584 > 485$

10. Arrange the numbers in ascending and descending order.

a) 324, 344, 321, 423

Ascending order

321, 324, 344, 423

Descending order

423, 344, 324, 321

b) 723, 764, 712, 709

Ascending order

709, 712, 723, 764

Descending order

764, 723, 712, 709

c) 844, 804, 819, 840

Ascending order

804, 819, 840, 844

Descending order

844, 840, 819, 804

d) 997, 934, 999, 954

Ascending order

934, 954, 997, 999

Descending order

999, 997, 954, 934

11. Round off the given numbers to the nearest 10 and 100.

	Numbers	Nearest 10	Nearest 100
a)	5672	Given number is 5672. The digit at the ones place is 2 which is less than 5. So, the ones place digit will be replaced by 0 and tens place digit will remain the same. So, 5672 rounded off to the nearest 10 is 5670.	Given number is 5672 The digit at the tens place is 7 which is greater than 5. So, the ones and tens place digits will be replaced by 0 and hundreds place digit is increased by 1. So, 5672 rounded off to the nearest 100 is 5700.
b)	84,549	Given number is 84549. The digit at the ones place is 9, which is greater than 5. So, the ones place digit will be replaced by 0 and tens place digit is increased by 1. So, 84549 rounded off to the nearest 10 is 84550.	Given number is 84549. The digit at the tens place is 4 which is less than 5. So, the ones and tens place digits will be replaced by 0 and hundreds place digit will remain the same. So, 84549 rounded off to the nearest 100 is 84500.

	Numbers	Nearest 10	Nearest 100
c)	6786	Given number is 6786. The digit at the ones place is 6, which is greater than 5. So, the ones place digit will be replaced by 0 and tens place digit is increased by 1. So, 6786 rounded off to the nearest 10 is 6790.	Given number is 6786. The digit at the tens place is 8 which is greater than 5. So, the ones and tens place digits will be replaced by 0 and hundreds place digit is increased by 1. So, 6786 rounded off to the nearest 100 is 6800.
d)	92,555	Given number is 92555 The digit at the ones place is 5. So, the ones place digit will be replaced by 0 and tens place digit is increased by 1. So, 92555 rounded off to the nearest 10 is 92560.	Given number is 92555. The digit at the tens place is 5. So, the ones and tens place digits will be replaced by 0 and hundreds place digit is increased by 1. So, 92555 rounded off to the nearest 100 is 92600.

	Numbers	Nearest 10	Nearest 100
e)	7,6761	Given number is 76761 The digit at the ones place is 1 which is less than 5. So, the ones place digit will be replaced by 0 and tens place digit will remain same. So, 76761 rounded off to the nearest 10 is 76760.	Given number is 76761 The digit at the tens place is 6 which is greater than 5. So, the ones and tens place digits will be replaced by 0 and hundreds place digit is increased by 1. So, 76761 rounded off to the nearest 100 is 76800.
f)	4378	Given number is 4378. The digit at the ones place is 8, which is greater than 5. So, the ones place digit will be replaced by 0 and tens place digit is increased by 1. So, 4378 rounded off to the nearest 10 is 4380.	Given number is 4378. The digit at the tens place is 7 which is greater than 5. So, the ones and tens place digits will be replaced by 0 and hundreds place digit is increased by 1. So, 4378 rounded off to the nearest 100 is 4400.

	Numbers	Nearest 10	Nearest 100
g)	19,986	Given number is 19986. The digit at the ones place is 6, which is greater than 5. So, the ones place digit will be replaced by 0 and tens place digit is increased by 1. So, 19986 rounded off to the nearest 10 is 19990.	Given number is 19986. The digit at the tens place is 8 which is greater than 5. So, the ones and tens place digits will be replaced by 0 and hundreds place digit is increased by 1. So, 19986 rounded off to the nearest 100 is 191000.
h)	72,765	Given number is 72765. The digit at the ones place is 5. So, the ones place digit will be replaced by 0 and tens place digit is increased by 1. So, 72765 rounded off to the nearest 10 is 72770.	Given number is 72765. The digit at the tens place is 6 which is greater than 5. So, the ones and tens place digits will be replaced by 0 and hundreds place digit is increased by 1. So, 72765 rounded off to the nearest 100 is 72800.

Unit 2: Number Operations

i) Addition

Learning Check 2.1

1. Solve these.

a)

Th	H	T	O
2	5	1	3
+	2	4	5
2	7	5	8

b)

Th	H	T	O
4	2	3	2
+	3	2	3
4	5	5	5

c)

Th	H	T	O
3	2	1	6
+	2	2	0
5	4	1	7

d)

Th	H	T	O
5	6	1	3
+	2	0	6
7	6	7	8

e)

Th	H	T	O
7	2	9	4
+	1	4	0
8	6	9	5

f)

Th	H	T	O
2	1	8	0
+	5	3	1
7	4	9	5

g)

Th	H	T	O
5	^① 1	^① 2	4
+	6	7	8
5	8	0	2

h)

Th	H	T	O
^① 3	^① 5	^① 6	8
+	6	3	3
4	2	0	1

i)

Th	H	T	O
^① 6	7	^① 3	4
+	2	4	0
9	1	4	1

j)

Th	H	T	O
^① 5	^① 8	^① 6	5
+	2	3	4
8	2	1	0

k)

Th	H	T	O
^① 2	^① 7	^① 3	7
+	4	4	6
7	2	0	4

l)

Th	H	T	O
^① 3	^① 5	^① 2	7
+	4	4	8
8	0	1	1

2. Add the following.

a) $3642 + 4214$

Th	H	T	O
3	6	4	2

 $+$

Th	H	T	O
4	2	1	4

 $=$

Th	H	T	O
7	8	5	6

b) $2421 + 3500$

Th	H	T	O
2	4	2	1

 $+$

Th	H	T	O
3	5	0	0

 $=$

Th	H	T	O
5	9	2	1

c) $1509 + 2310$

Th	H	T	O
1	5	0	9

 $+$

Th	H	T	O
2	3	1	0

 $=$

Th	H	T	O
3	8	1	9

d) $2162 + 2775$

Th	H	T	O
2	1	6	2

 $+$

Th	H	T	O
2	7	7	5

 $=$

Th	H	T	O
4	9	3	7

e) $2247 + 7437$

Th	H	T	O
2	2	4	7

 $+$

Th	H	T	O
7	4	3	7

 $=$

Th	H	T	O
9	6	8	4

f) $7256 + 2634$

Th	H	T	O
7	2	5	6

 $+$

Th	H	T	O
2	6	3	4

 $=$

Th	H	T	O
9	8	9	0

3. Add mentally.

a) 37 and 52

Step I: First write the numbers as tens and ones.

$$37 = 30 + 7$$

$$52 = 50 + 2$$

Step II: Now add tens to tens and ones to ones.

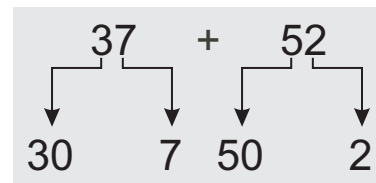
$$30 + 50 = 80$$

$$7 + 2 = 9$$

Step III: Finally add the results.

$$80 + 9 = 89$$

$$\text{So, } 37 + 52 = 89.$$



b) 60 and 21

Step I: First write the numbers as tens and ones.

$$60 = 60 + 0$$

$$21 = 20 + 1$$

Step II: Now add tens to tens and ones to ones.

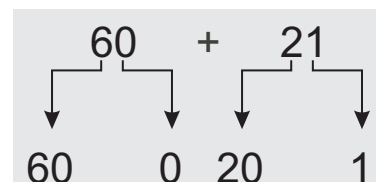
$$60 + 20 = 80$$

$$0 + 1 = 1$$

Step III: Finally add the results.

$$80 + 1 = 81$$

$$\text{So, } 60 + 21 = 81.$$

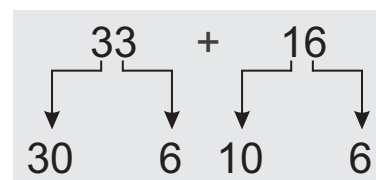


c) 33 and 16

Step I: First write the numbers as tens and ones.

$$33 = 30 + 3$$

$$16 = 10 + 6$$



Step II: Now add tens to tens and ones to ones.

$$30 + 10 = 40$$

$$3 + 6 = 9$$

Step III: Finally add the results.

$$40 + 9 = 49$$

$$\text{So, } 33 + 16 = 49.$$

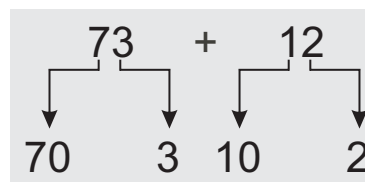
d) 73 + 12

Step I: First write the numbers as tens and ones.

$$73 = 70 + 3$$

$$12 = 10 + 2$$

Step II: Now add tens to tens and ones to ones.



$$70 + 10 = 80$$

$$3 + 2 = 5$$

Step III: Finally add the results.

$$80 + 5 = 85$$

$$\text{So, } 73 + 12 = 85.$$

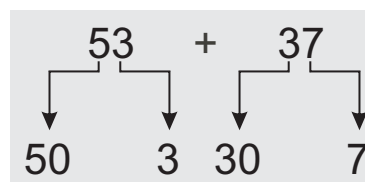
e) 53 + 37

Step I: First write the numbers as tens and ones.

$$53 = 50 + 3$$

$$37 = 30 + 7$$

Step II: Now add tens to tens and ones to ones.



$$50 + 30 = 80$$

$$3 + 7 = 10$$

Step III: Finally add the results.

$$80 + 10 = 90$$

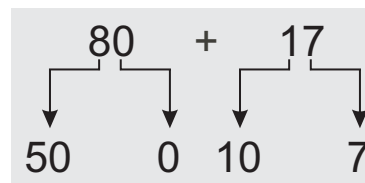
$$\text{So, } 53 + 37 = 90.$$

f) $80 + 17$

Step I: First write the numbers as tens and ones.

$$80 = 80 + 0$$

$$17 = 10 + 7$$



Step II: Now add tens to tens and ones to ones.

$$80 + 10 = 90$$

$$0 + 7 = 7$$

Step III: Finally add the results.

$$90 + 7 = 97$$

$$\text{So, } 80 + 17 = 97.$$

4. There are 3201 goats and 1024 sheep in a farm. How many animals are there altogether?

Solution:

Number of goats	=	3 2 0 1
Number of sheep	= +	1 0 2 4
Total animals altogether	=	4 2 2 5

5. In a stationery store, 6771 blue pencils and 3132 red pencils were sold in a month. Find the total number of pencils sold altogether.

Solution:

Number of blue pencils sold	=	6 7 7 1
Number of red pencils sold	= +	3 1 3 2
Total pencils sold altogether	=	9 9 0 3

6. Ali's weekly income is Rs 5950 and his brother Asim's weekly income is Rs 2346. Find the sum of their weekly incomes.

Solution:

Ali's weekly income	=	Rs	5 9 5 0
Asim's weekly income	= +	Rs	2 3 4 6
Sum of their weekly incomes	=	Rs	8 2 9 6

7. There are 1902 boys and 1788 girls in a school. Find the total number of students in the school.

Solution:

Number of boys	=	1 9 0 2
Number of girls	= +	1 7 8 8
Total students	=	3 6 9 0

8. There are 5205 single storey houses and 3455 double storey houses in a housing society. How many houses are there in the society altogether?

Solution:

Number of single story houses	=	5 2 0 5
Number of double story houses	= +	3 4 5 5
Total houses altogether	=	8 6 6 0

Unit Check Addition

1. Encircle the correct options.

a) The sum of 4529 and 2897 is _____.

- i) 6526 ☒ ii) 7426 iii) 3426 iv) 6426

b) In _____ addition, we arrange the numbers in rows.

- ☒ i) horizontal ii) vertical
iii) straight iv) every

c) We start adding digits from _____.

- i) left to right ii) top to right
iii) bottom to left ☒ iv) right to left

d) Which of these is equal to 8890?

i) $6384 + 2366$

ii) $6385 + 2615$

iii) $6324 + 2566$

iv) $6394 + 2366$

e) $7676 + 1818 = \underline{\hspace{2cm}}$.

i) 9594

ii) 9794

iii) 9494

iv) 8994

2. Add the following.

a)

Th	H	T	O
5	8	2	7
+2	0	6	2
7	8	8	9

b)

Th	H	T	O
4	1	5	6
+3	2	0	1
7	3	5	7

c)

Th	H	T	O
1	4	9	8
+5	2	0	0
6	6	9	8

d)

Th	H	T	O
2	9	5	8
+4	6	4	3
7	6	0	1

e)

Th	H	T	O
3	4	① 1	5
+5	3	9	7
8	8	1	2

f)

Th	H	T	O
7	5	7	8
+2	2	6	0
9	8	3	8

3. Add mentally.

a) $2378 + 1401$

Th	H	T	O
2	3	7	8

+

Th	H	T	O
1	4	0	1

=

Th	H	T	O
3	7	7	9

b) $5005 + 4421$

Th	H	T	O
5	0	0	5

+

Th	H	T	O
4	4	2	1

=

Th	H	T	O
9	4	2	6

c) 1509 + 2310

Th	H	T	O
4	1	0 ^①	9

+

Th	H	T	O
2	6	5	5

=

Th	H	T	O
6	7	6	4

d) 2162 + 2775

Th	H	T	O
4	2	0	1

+

Th	H	T	O
5	0	9	8

=

Th	H	T	O
9	2	9	9

e) 2247 + 7437

Th	H	T	O
5	6	2	3

+

Th	H	T	O
3	1	4	0

=

Th	H	T	O
8	7	6	3

f) 7256 + 2634

Th	H	T	O
4 ^①	2 ^①	7 ^①	7

+

Th	H	T	O
1	8	7	8

=

Th	H	T	O
6	1	5	5

4. Add mentally.

a) 17 and 61

Step I: First write the numbers as tens and ones.

$$17 = 10 + 7$$

$$61 = 60 + 1$$

Step II: Now add tens to tens and ones to ones.

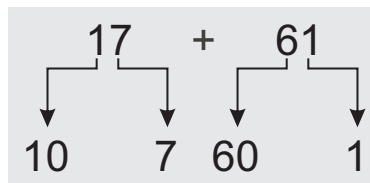
$$10 + 60 = 70$$

$$7 + 1 = 8$$

Step III: Finally add the results.

$$70 + 8 = 78$$

So, $17 + 61 = 78$.



b) 34 and 51

Step I: First write the numbers as tens and ones.

$$34 = 30 + 4$$

$$51 = 50 + 1$$

Step II: Now add tens to tens and ones to ones.

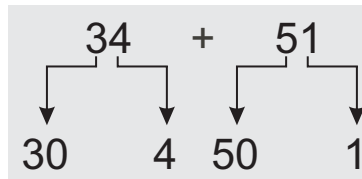
$$30 + 50 = 80$$

$$4 + 1 = 5$$

Step III: Finally add the results.

$$80 + 5 = 85$$

$$\text{So, } 34 + 51 = 85.$$



c) 72 and 11

Step I: First write the numbers as tens and ones.

$$72 = 70 + 2$$

$$11 = 10 + 1$$

Step II: Now add tens to tens and ones to ones.

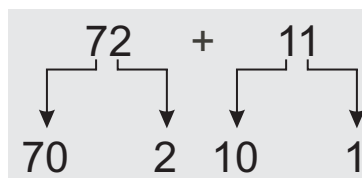
$$70 + 10 = 80$$

$$2 + 1 = 3$$

Step III: Finally add the results.

$$80 + 3 = 83$$

$$\text{So, } 72 + 11 = 83.$$



d) 42 and 66

Step I: First write the numbers as tens and ones.

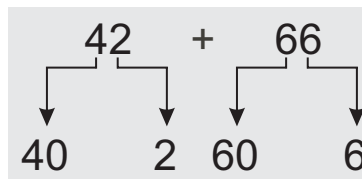
$$42 = 40 + 2$$

$$66 = 60 + 6$$

Step II: Now add tens to tens and ones to ones.

$$40 + 60 = 100$$

$$2 + 6 = 8$$



Step III: Finally add the results.

$$100 + 8 = 108$$

So, $42 + 66 = 108$.

e) $21 + 50$

Step I: First write the numbers as tens and ones.

$$21 = 20 + 1$$

$$50 = 50 + 0$$

Step II: Now add tens to tens and ones to ones.

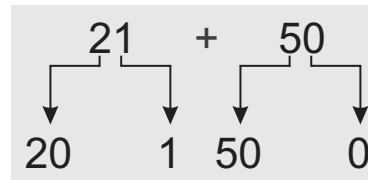
$$20 + 50 = 70$$

$$1 + 0 = 1$$

Step III: Finally add the results.

$$70 + 1 = 71$$

So, $21 + 50 = 71$.



e) $82 + 13$

Step I: First write the numbers as tens and ones.

$$82 = 80 + 2$$

$$13 = 10 + 3$$

Step II: Now add tens to tens and ones to ones.

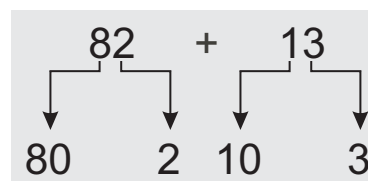
$$80 + 10 = 90$$

$$2 + 3 = 5$$

Step III: Finally add the results.

$$90 + 5 = 95$$

So, $82 + 13 = 95$.



5. Ibrahim got Rs 5060 and Ahad got Rs 2570 as Eidi. How much money did they both get altogether?

Solution:

Amount Ibrahim got as Eidi	=	Rs	5 ^① 060
Amount Ahad got as Eidi	=	+ Rs	2570
Total amount altogether	=	Rs	7630

6. Saad donates Rs 6325 to help build a masjid and Rs 2348 to help build a hospital. Find the total amount he donated.

Solution:

Donates for masjid	=	Rs	6 ^① 325
Donates for Hospital	=	+ Rs	2348
Total amount donated	=	Rs	8673

Subtraction

Learning Check 2.2

1. Solve these.

a)

Th	H	T	O
5	8	8	7
-	4	6	5
5	4	2	2

b)

Th	H	T	O
4	8	2	6
-	4	5	0
0	3	2	4

c)

Th	H	T	O
6	8	7	8
-	5	4	6
1	4	1	6

d)

Th	H	T	O
7	8	8	1
-	3	8	5
4	0	3	1

e)

Th	H	T	O
9	8	7	4
-	6	1	4
3	7	3	1

f)

Th	H	T	O
9	3	4	2
-	1	2	2
8	1	2	1

g)

Th	H	T	O
8	5	¹ 2	¹ 1
-	5	0	8
8	0	1	3

h)

Th	H	T	O
⁸ 9	¹ 2	¹⁴ 5	¹ 4
-4	7	5	9
4	4	9	5

i)

Th	H	T	O
⁷ 8	¹³ 4	¹⁵ 6	¹ 3
-7	4	8	6
0	9	7	7

j)

Th	H	T	O
8	⁶ 7	¹⁷ 8	¹ 0
-5	3	9	6
3	3	8	4

k)

Th	H	T	O
⁸ 9	¹⁵ 6	¹⁶ 7	¹ 3
-2	6	9	4
6	9	7	9

l)

Th	H	T	O
6	⁶ 7	¹ 2	¹ 8
-1	4	6	9
5	2	5	9

2. Subtract the following.

a) 8362 - 5221

Th	H	T	O
8	3	6	2

-

Th	H	T	O
5	2	2	1

=

Th	H	T	O
3	1	4	1

b) 6645 - 5405

Th	H	T	O
6	6	4	5

-

Th	H	T	O
5	4	0	5

=

Th	H	T	O
1	2	4	0

c) 8923 - 3810

Th	H	T	O
8	9	2	3

-

Th	H	T	O
3	8	1	0

=

Th	H	T	O
5	1	1	3

d) 9152 - 6371

Th	H	T	O
9	1	5	2

-

Th	H	T	O
6	3	7	1

=

Th	H	T	O
2	7	8	1

e) 7630 - 1244

Th	H	T	O	-	Th	H	T	O	=	Th	H	T	O
7	6	3	0		1	2	4	4		6	3	8	6

f) 8901 - 5656

Th	H	T	O	-	Th	H	T	O	=	Th	H	T	O
8	9	0	1		5	6	5	6		3	2	4	5

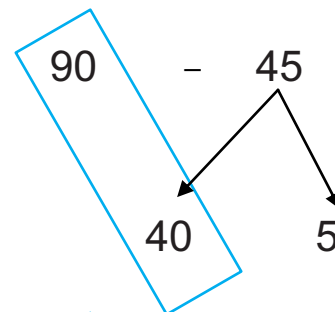
3. Subtract mentally.

a) 45 from 90

90 - 45 is the same as (90 - 40) - 5 or 50 - 5.

50 - 5 = 45

So, 90 - 45 = 45.

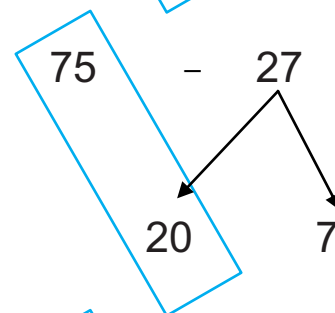


b) 27 from 75

75 - 27 is the same as (75 - 20) - 7 or 55 - 7.

55 - 7 = 48

So, 75 - 27 = 48.

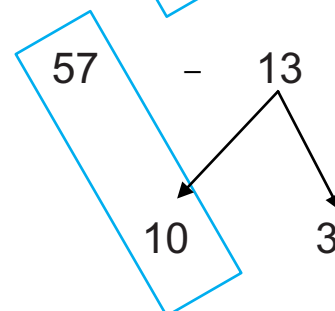


c) 13 from 57

57 - 13 is the same as (57 - 10) - 3 or 47 - 3.

47 - 3 = 44

So, 57 - 13 = 44.

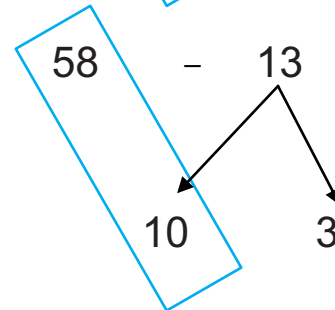


d) 58 - 13

58 - 13 is the same as (58 - 10) - 3 or 48 - 3.

48 - 3 = 45

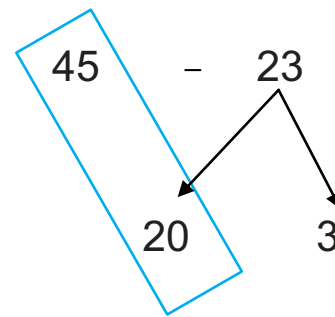
So, 58 - 13 = 45.



e) $45 - 23$

$$45 - 23 = (45 - 20) - 3 = 25 - 3 \\ = 22$$

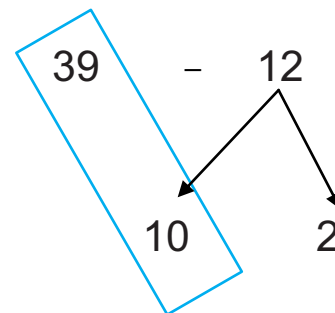
So, $45 - 23 = 22$.



f) $39 - 12$

$$39 - 12 = (39 - 10) - 2 = 29 - 2 \\ = 27$$

So, $39 - 12 = 27$



4. Rabia donated Rs 5462 as charity from her savings of Rs 9500. How much money does she has left?

Solution:

Amount Rabia had = Rs 9 5 0 0

Amount Rabia donated = - Rs 5 4 6 2

Amount left = Rs 4 0 3 8

So, she has Rs 4038.

5. Iqbal has Rs 3550. He wants to buy a printer that costs Rs 7950. How much more money does he need to buy the printer?

Solution:

Cost of printer = Rs 7 9 5 0

Amount Iqbal has = - Rs 3 5 5 0

Amount Iqbal needs = Rs 4 4 0 0

So, Iqbal needs Rs 4400 more.

6. There are 8080 animals and birds in a zoo. If there are 4246 birds, find the number of animals in the zoo.

Solution:

$$\begin{array}{rcll} \text{Total animals and birds in zoo} & = & \text{Rs} & 8080 \\ \text{Total birds} & = & - \text{Rs} & 4246 \\ \hline \text{Total animals} & = & \text{Rs} & 3834 \end{array}$$

So, there are 3834 animals.

7. Arham collected Rs 5890 from his family on Eid. He bought a set of blocks for Rs 4600. How much money does he have left?

Solution:

$$\begin{array}{rcll} \text{Amount collected by Arham} & = & \text{Rs} & 5890 \\ \text{spent on blocks} & = & - \text{Rs} & 4600 \\ \hline \text{Amount left} & = & \text{Rs} & 1290 \end{array}$$

So, has Rs 1290 left.

8. Usman has 2145 golden coins and 3244 silver coins in his collection. How many more silver coins does he have than golden coins?

Solution:

$$\begin{array}{rcll} \text{Number of silver coins} & = & \text{Rs} & 3244 \\ \text{Number of golden coins} & = & - \text{Rs} & 2145 \\ \hline \text{More silver coins} & = & \text{Rs} & 1099 \end{array}$$

So, he has 1099 more silver coins than golden ones.

Unit Check Subtraction

1. Encircle the correct options.

- a) The result of subtraction is called the _____.
 i) sum ☒ ii) difference iii) quotient iv) product
- b) The difference of 6245 and 7812 is _____.
 i) 1267 ii) 2567 ☒ iii) 1567 iv) 1865
- c) We subtract digits from _____.
 i) left to right ii) top to right
 iii) bottom to left ☒ iv) right to left
- d) Which of these is equal to 5438?
☒ i) 6693 – 1255 ii) 6893 – 1457
 iii) 6093 – 1275 iv) 6993 – 1955
- e) $8000 - 2999 =$ _____.
 i) 3011 ii) 3001 iii) 5051 ☒ iv) 5001

2. Solve the following.

a)

	Th	H	T	O
	5	8	8	7
–		2	4	2
	5	6	4	5

b)

	Th	H	T	O
	8	3	6	2
–	6	3	6	1
	2	0	0	1

c)

	Th	H	T	O
	6	6	7	5
–	3	0	0	2
	3	6	7	3

d)

	Th	H	T	O
	1	2	8	3
–	1	2	3	0
	0	0	5	3

e)

	Th	H	T	O
	4	2	7	2
–	3	1	5	0
	1	1	2	2

f)

	Th	H	T	O
	2	7	7	1
–	2	3	2	1
	0	4	5	0

g)

Th	H	T	O
2	4	2	9
-1	7	7	7
0	6	5	2

h)

Th	H	T	O
9	0	1	6
-4	0	6	2
4	9	5	4

i)

Th	H	T	O
7	5	0	¹ 4
-5	2	1	6
2	2	8	8

3. Subtract the following.

a) 2348 - 1099

Th	H	T	O
2	3	4	8

-

Th	H	T	O
1	0	9	9

=

Th	H	T	O
1	2	4	9

b) 7822 - 4288

Th	H	T	O
7	8	2	2

-

Th	H	T	O
4	2	8	8

=

Th	H	T	O
3	5	3	4

c) 5628 - 3209

Th	H	T	O
5	6	2	8

-

Th	H	T	O
3	2	0	9

=

Th	H	T	O
2	4	1	9

d) 4344 - 2005

Th	H	T	O
4	3	4	4

-

Th	H	T	O
2	0	0	5

=

Th	H	T	O
2	3	3	9

e) 8255 - 7999

Th	H	T	O
8	2	5	5

-

Th	H	T	O
7	9	9	9

=

Th	H	T	O
	2	5	6

f) 6100 - 1555

Th	H	T	O
6	1	0	0

-

Th	H	T	O
1	5	5	5

=

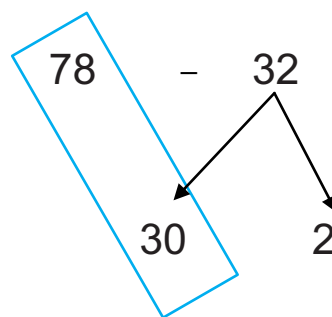
Th	H	T	O
4	5	4	5

4. Solve the following mentally.

a) $78 - 23$

$$\begin{aligned} 78 - 32 &= (78 - 30) - 2 \\ &= 48 - 2 \\ &= 46 \end{aligned}$$

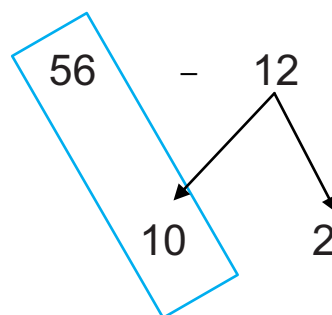
So, $78 - 32 = 46$.



b) $56 - 12$

$$\begin{aligned} 56 - 12 &= (56 - 10) - 2 \\ &= 46 - 2 \\ &= 44 \end{aligned}$$

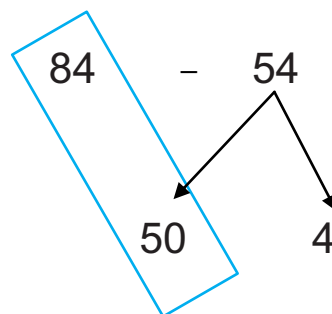
So, $56 - 12 = 44$.



c) $84 - 54$

$$\begin{aligned} 84 - 54 &= (84 - 50) - 4 \\ &= 34 - 4 \\ &= 30 \end{aligned}$$

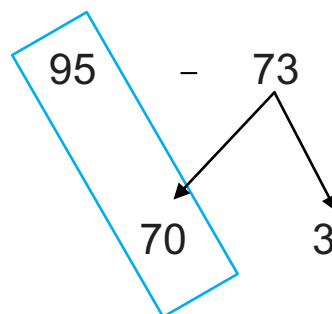
So, $84 - 54 = 30$.



d) $95 - 73$

$$\begin{aligned} 95 - 73 &= (95 - 70) - 3 \\ &= 25 - 3 \\ &= 22 \end{aligned}$$

So, $95 - 73 = 22$.



5. 5234 plants were planted in a town. Out of these, 1090 plants didn't survive due to severe weather conditions. How many plants survived?

Solution:

$$\begin{array}{rcl} \text{Total number of plants} & = & 5\ 2\ 3\ 4 \\ \text{Plants didn't survive} & = & \underline{-\ 1\ 0\ 9\ 0} \\ \text{Plants survive} & = & 4\ 1\ 4\ 4 \end{array}$$

So, 4144 plants survived.

6. Marwa collected Rs 7245 and Ibrahim collected Rs 5690 during a charity event. How much less did Ibrahim collect than Marwa?

Solution:

$$\begin{array}{rcl} \text{Amount collected by Marwa} & = & \text{Rs } 7\ 2\ 4\ 5 \\ \text{Amount collected by Ibrahim} & = & \underline{-\ \text{Rs } 5\ 6\ 9\ 0} \\ \text{Less amount collected by Ibrahim} & = & \text{Rs } 1\ 5\ 5\ 5 \end{array}$$

So, Ibrahim collected Rs 1555 less than Marwa.

Multiplication

Learning Check 2.3

1. Develop multiplication tables of 6 and 8.

Table of 6

$$1 \times 6 = 6$$

$$2 \times 6 = 12$$

$$3 \times 6 = 18$$

$$4 \times 6 = 24$$

$$5 \times 6 = 30$$

$$6 \times 6 = 36$$

$$7 \times 6 = 42$$

$$8 \times 6 = 48$$

$$9 \times 6 = 54$$

$$10 \times 6 = 60$$

Table of 8

$$1 \times 8 = 8$$

$$2 \times 8 = 16$$

$$3 \times 8 = 24$$

$$4 \times 8 = 32$$

$$5 \times 8 = 40$$

$$6 \times 8 = 48$$

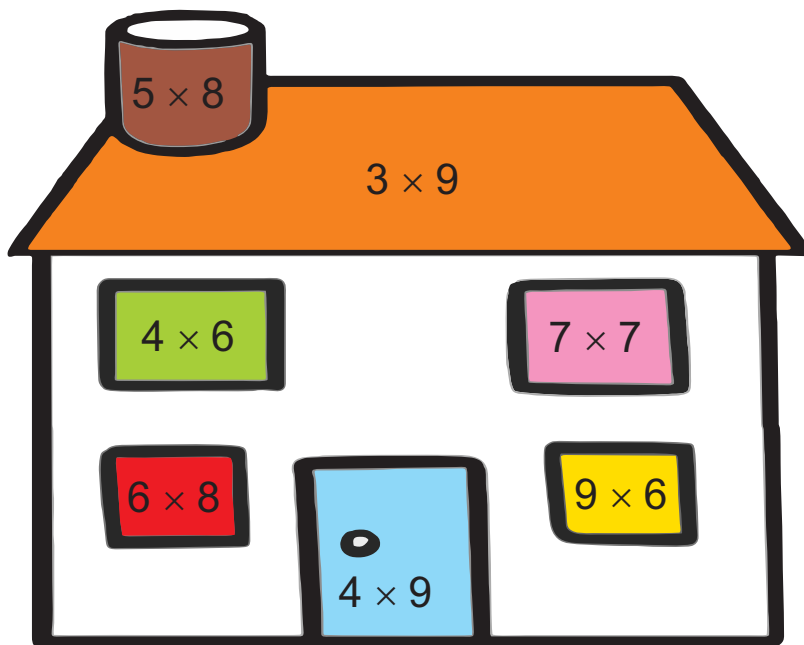
$$7 \times 8 = 56$$

$$8 \times 8 = 64$$

$$9 \times 8 = 72$$

$$10 \times 8 = 80$$

2. Multiply and colour according to the given colour key.



36	Blue
24	Green
54	Yellow
27	Orange
49	Pink
40	Brown
48	Red

3. Multiply the following.

a) $2 \times 9 =$ 18

b) $7 \times 8 =$ 56

c) $4 \times 6 =$ 24

d) $5 \times 7 =$ 35

e) $6 \times 8 =$ 48

f) $6 \times 7 =$ 42

g) $8 \times 9 =$ 72

h) $9 \times 6 =$ 54

Learning Check 2.4

1. Multiply the following.

a)

$$\begin{array}{r} 2 \quad 2 \\ \times \quad 1 \\ \hline 2 \quad 2 \end{array}$$

b)

$$\begin{array}{r} 4 \quad 2 \\ \times \quad 2 \\ \hline 8 \quad 4 \end{array}$$

c)

$$\begin{array}{r} 3 \quad 1 \\ \times \quad 3 \\ \hline 9 \quad 3 \end{array}$$

d)

$$\begin{array}{r} 1 \quad 4 \\ \times \quad 2 \\ \hline 2 \quad 8 \end{array}$$

e

$$\begin{array}{r} 2 \quad 2 \\ \times \quad 3 \\ \hline 6 \quad 6 \end{array}$$

f

$$\begin{array}{r} 2 \quad 4 \\ \times \quad 2 \\ \hline 4 \quad 8 \end{array}$$

g

$$\begin{array}{r} 3 \quad 2 \\ \times \quad 3 \\ \hline 9 \quad 6 \end{array}$$

h

$$\begin{array}{r} 3 \quad 3 \\ \times \quad 3 \\ \hline 9 \quad 9 \end{array}$$

i

$$\begin{array}{r} 2 \quad 2 \\ \times \quad 2 \\ \hline 4 \quad 4 \end{array}$$

j

$$\begin{array}{r} 1 \quad 0 \\ \times \quad 4 \\ \hline 4 \quad 0 \end{array}$$

k

$$\begin{array}{r} 1 \quad 3 \\ \times \quad 3 \\ \hline 3 \quad 9 \end{array}$$

l

$$\begin{array}{r} 4 \quad 1 \\ \times \quad 2 \\ \hline 8 \quad 2 \end{array}$$

m

$$\begin{array}{r} 1 \quad 4 \\ \times \quad 6 \\ \hline 8 \quad 4 \end{array}$$

n

$$\begin{array}{r} 5 \quad 9 \\ \times \quad 3 \\ \hline 1 \quad 7 \quad 7 \end{array}$$

o

$$\begin{array}{r} 6 \quad 5 \\ \times \quad 2 \\ \hline 1 \quad 3 \quad 0 \end{array}$$

p

$$\begin{array}{r} 2 \quad 5 \\ \times \quad 4 \\ \hline 1 \quad 0 \quad 0 \end{array}$$

q

$$\begin{array}{r} 8 \quad 3 \\ \times \quad 7 \\ \hline 5 \quad 8 \quad 1 \end{array}$$

r

$$\begin{array}{r} 1 \quad 9 \\ \times \quad 8 \\ \hline 1 \quad 5 \quad 2 \end{array}$$

s

$$\begin{array}{r} 9 \quad 5 \\ \times \quad 5 \\ \hline 4 \quad 7 \quad 5 \end{array}$$

t

$$\begin{array}{r} 3 \quad 4 \\ \times \quad 3 \\ \hline 1 \quad 0 \quad 2 \end{array}$$

u

$$\begin{array}{r} 4 \quad 5 \\ \times \quad 2 \\ \hline 9 \quad 0 \end{array}$$

v

$$\begin{array}{r} 3 \quad 5 \\ \times \quad 4 \\ \hline 1 \quad 4 \quad 0 \end{array}$$

w

$$\begin{array}{r} 6 \quad 2 \\ \times \quad 7 \\ \hline 4 \quad 3 \quad 4 \end{array}$$

x

$$\begin{array}{r} 5 \quad 2 \\ \times \quad 5 \\ \hline 2 \quad 6 \quad 0 \end{array}$$

Learning Check 2.5

1. Multiply these.

a) $2 \times 0 = \underline{0}$

b) $5 \times 0 = \underline{0}$

c) $10 \times 0 = \underline{0}$

d) $3 \times 0 = \underline{0}$

e) $6 \times 0 = \underline{0}$

f) $7 \times 0 = \underline{0}$

g) $9 \times 0 = \underline{0}$

h) $1 \times 0 = \underline{0}$

i) $0 \times 0 = \underline{0}$

2. Multiply the following.

a) $2 \times 1 = \underline{2}$

b) $5 \times 1 = \underline{5}$

c) $10 \times 1 = \underline{10}$

d) $3 \times 1 = \underline{3}$

e) $6 \times 1 = \underline{6}$

f) $7 \times 1 = \underline{7}$

g) $9 \times 1 = \underline{9}$

h) $1 \times 1 = \underline{1}$

i) $0 \times 1 = \underline{0}$

3. Multiply using mental calculations.

a) $3 \times 8 = \underline{24}$

Recall the table of 3 till 8

b) $5 \times 8 = \underline{40}$

Recall the table of 5 till 8

c) $4 \times 7 = \underline{28}$

Recall the table of 4 till 7

d) $8 \times 6 = \underline{48}$

Recall the table of 6 till 8

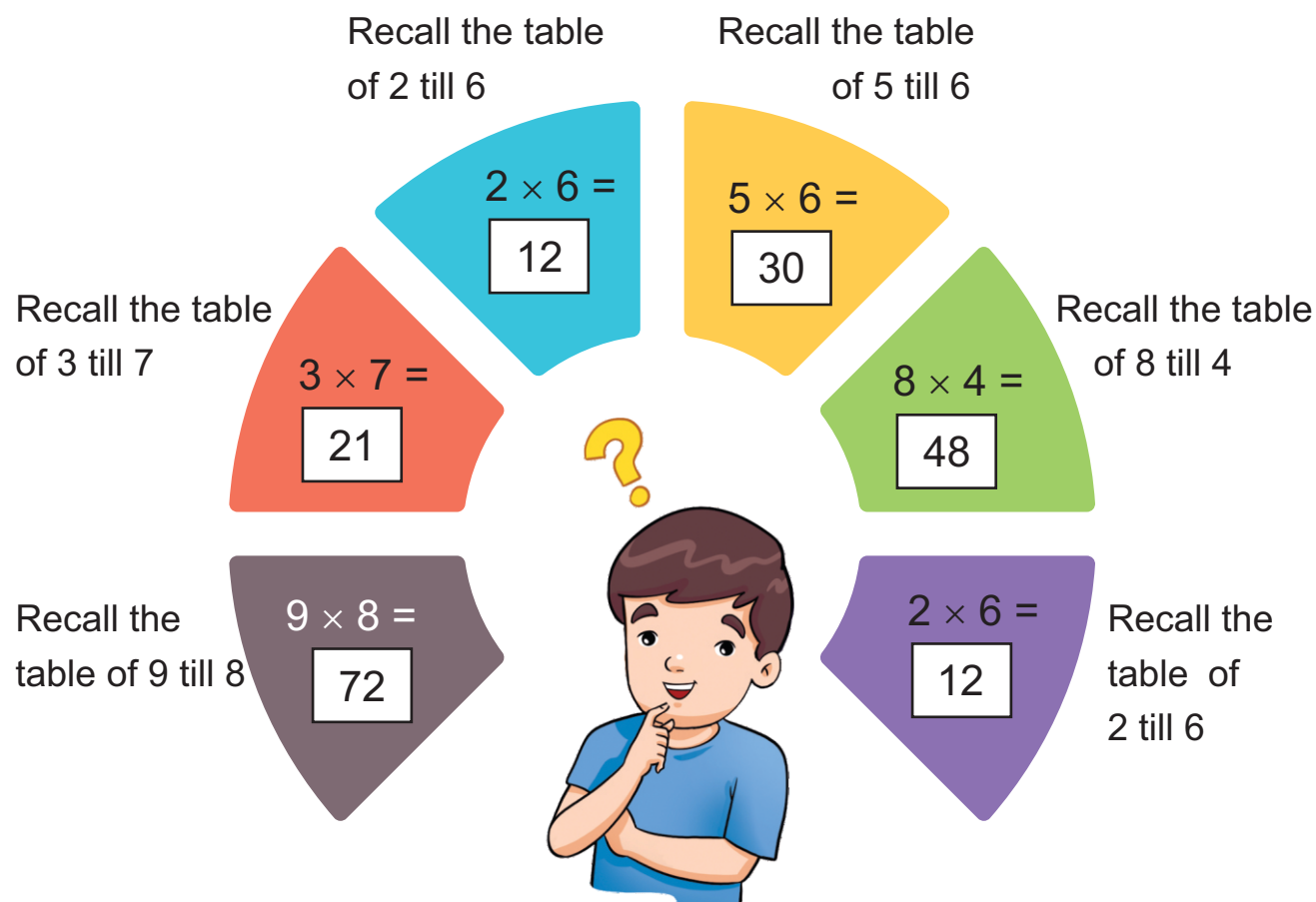
e) $6 \times 6 = \underline{36}$

Recall the table of 6 till 6

f) $8 \times 7 = \underline{56}$

Recall the table of 8 till 7

4. Multiply mentally.



Learning Check 2.6

1. Ahmad recites 6 verses of the Holy Quran in a day. How many verses will he recite in 43 days?

Solution:

Verses recited in 1 day

$$= 6$$

Total number of days

$$= 43$$

Verses recited in 43 days

$$= 43 \times 6$$

$$= 258$$

$$\begin{array}{r} \textcircled{1} 4 \quad 3 \\ \times \quad 6 \\ \hline 2 \quad 5 \quad 8 \end{array}$$

So, Ahmad will recite 258 verses in 43 days.

2. There are 32 tables in a restaurant. Each table has 2 flower vases. How many flower vases are there altogether?

Solution:

Total number of tables in restaurant	= 32	3 2
Flower vases on each table	= 2	× 2
Total flower vases altogether	= 32×2	<u>6 4</u>
	= 64	

So, there are 64 flower vases altogether.

3. A carpenter makes 9 chairs in one day. How many chairs will he make in 23 days?

Solution:

Chair made in one day	= 9	^② 2 3
Total number of days	= 23	× 9
Total chairs made altogether	= 23×9	<u>20 7</u>
	= 207	

So, 207 chairs will be made in 23 days.

4. There are 36 paint tubes in one pack. How many paint tubes are there in 7 packs?

Solution:

Paint tubes in one pack	= 36	^④ 3 6
Total number of packs	= 7	× 7
Total paint tubes	= 36×7	<u>2 5 2</u>
	= 252	

So, there are 252 paint tubes altogether.

5. A tricycle has 3 wheels. How many wheels are there on 33 tricycles altogether?

Solution:

Number of wheels in a tricycle	= 3	3	3
Number of tricycles	= 33	×	3
Total number of wheels	= 33×3	9	9
	= 99		

So, there are 99 wheels on 33 tricycles.

Unit Check Multiplication

1. Encircle the correct options.

a) The result of multiplication is called the _____.

- i) sum ☒ ii) product iii) quotient iv) difference

b) $7 \times 9 =$ _____.

- ☒ i) 63 ii) 53 iii) 33 iv) 36

c) 2 times 0 equals _____.

- i) 2 ii) 20 ☒ iii) 0 iv) 1

d) 41 times 1 equals _____.

- i) 1 ii) 0 ☒ iii) 41 iv) 14

e) How many legs do 15 octopuses have?

- i) 150 ☒ ii) 120 iii) 210 iv) 8

2. Find the product.

a	T	O
	4	0
	×	3
	1	2 0

b	T	O
	4	1
	×	2
	8	2

c	T	O
	1	2
	×	4
	4	8

d	T	O
	3	3
	×	2
	6	6

e	T	O
	1	1
	×	3
	3	3

f	T	O
	6	9
	×	3
	2	0 7
g	T	O
	4	6
	×	7
	3	2 2
h	T	O
	3	9
	×	9
	3	5 1
i	T	O
	1	2
	×	6
	7	2
j	T	O
	1	6
	×	4
	6	4

3. Develop multiplication tables of 7 and 9.

Table of 7

$1 \times 7 = 7$
$2 \times 7 = 14$
$3 \times 7 = 21$
$4 \times 7 = 28$
$5 \times 7 = 35$
$6 \times 7 = 42$
$7 \times 7 = 49$
$8 \times 7 = 56$
$9 \times 7 = 63$
$10 \times 7 = 70$

Table of 9

$1 \times 9 = 9$
$2 \times 9 = 18$
$3 \times 9 = 27$
$4 \times 9 = 36$
$5 \times 9 = 45$
$6 \times 9 = 54$
$7 \times 9 = 63$
$8 \times 9 = 72$
$9 \times 9 = 81$
$10 \times 9 = 90$

4. Multiply the following.

a) $9 \times 0 = \underline{0}$ b) $5 \times 1 = \underline{5}$ c) $7 \times 0 = \underline{0}$ d) $3 \times 1 = \underline{3}$

5. Multiply the following mentally.

a) $3 \times 7 = \underline{21}$ b) $4 \times 9 = \underline{36}$ c) $9 \times 6 = \underline{54}$ d) $5 \times 8 = \underline{40}$

6. A packet of cookies has 8 cookies in it. How many cookies are there in 19 packets?

Solution:

Number of cookies in one packet	= 8	$\begin{array}{r} 19 \\ \times 8 \\ \hline 152 \end{array}$
Number of packets	= 19	
Total cookies altogether	= 19×8	
	= 152	

So, there are 152 cookies in 19 packets altogether.

7. Sidra has grown carrots in her home garden. There are 22 carrots in one row. How many carrots are there in 9 such rows?

Solution:

Number of carrots in one row	= 22	$\begin{array}{r} 22 \\ \times 9 \\ \hline 198 \end{array}$
Number of row	= 9	
Total carrots altogether	= 22×9	
	= 198	

So, there are 152 cookies in 19 packets altogether.

8. The price of a box of erasers is Rs 75. If Arham buys 5 such packs, how much money will he spend?

Solution:

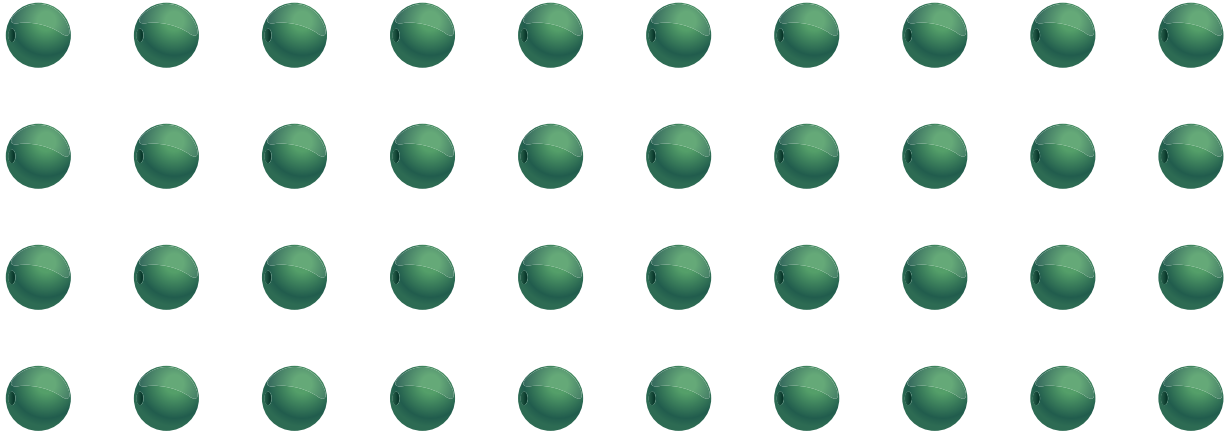
Price of a box of erasers	= 75	$\begin{array}{r} 75 \\ \times 5 \\ \hline 375 \end{array}$
Number of boxes	= 5	
Total price	= 75×5	
	= 375	

So, Arham will spend Rs 375 altogether.

Division

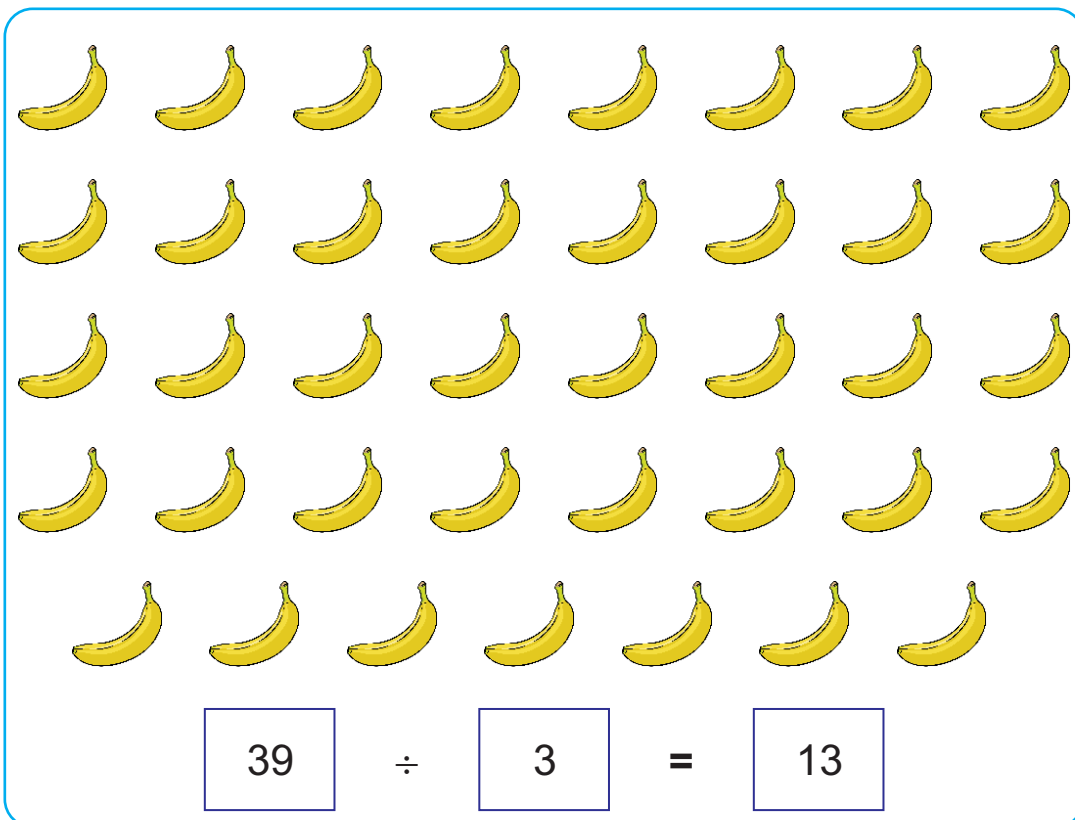
Learning Check 2.7

1. Divide 40 beads into 4 groups equally.



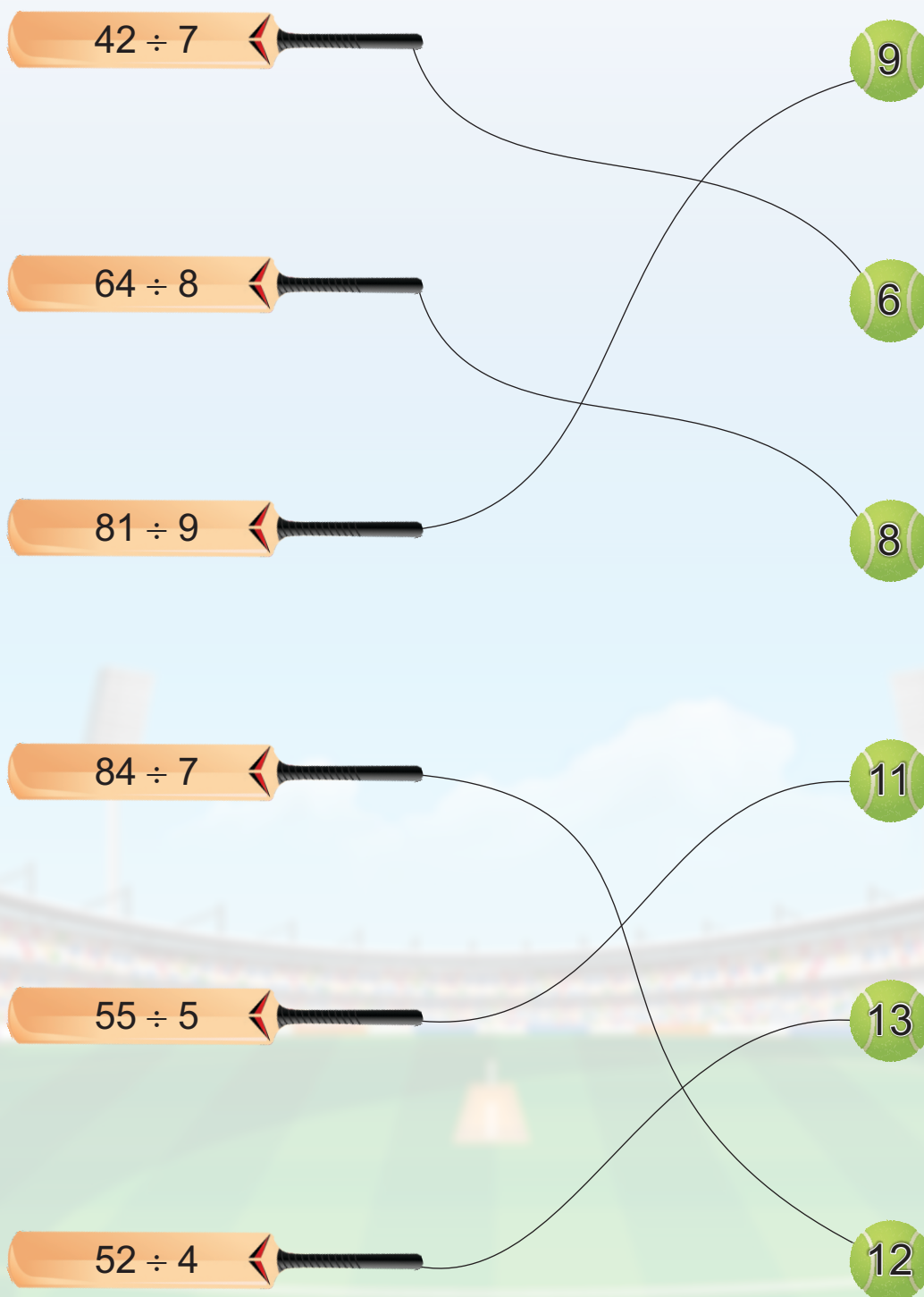
$$\boxed{40} \div \boxed{4} = \boxed{10}$$

2. Divide 39 bananas into 3 groups.



$$\boxed{39} \div \boxed{3} = \boxed{13}$$

3. Match the following.



4. Divide the following.

$$\begin{array}{r} 12 \\ \text{a) } 2 \overline{) 24} \\ \underline{-2} \downarrow \\ 04 \\ \underline{-4} \\ 0 \end{array}$$

$$\begin{array}{r} 15 \\ \text{b) } 5 \overline{) 75} \\ \underline{-5} \downarrow \\ 25 \\ \underline{-25} \\ 0 \end{array}$$

$$\begin{array}{r} 12 \\ \text{c) } 6 \overline{) 72} \\ \underline{-6} \downarrow \\ 12 \\ \underline{-12} \\ 0 \end{array}$$

$$\begin{array}{r} 14 \\ \text{d) } 6 \overline{) 84} \\ \underline{-6} \downarrow \\ 24 \\ \underline{-24} \\ 0 \end{array}$$

$$\begin{array}{r} 31 \\ \text{e) } 3 \overline{) 93} \\ \underline{-9} \downarrow \\ 03 \\ \underline{-03} \\ 0 \end{array}$$

$$\begin{array}{r} 12 \\ \text{f) } 7 \overline{) 84} \\ \underline{-7} \downarrow \\ 14 \\ \underline{-14} \\ 0 \end{array}$$

$$\begin{array}{r} 12 \\ \text{g) } 8 \overline{) 96} \\ \underline{-8} \downarrow \\ 16 \\ \underline{-16} \\ 0 \end{array}$$

$$\begin{array}{r} 11 \\ \text{h) } 9 \overline{) 99} \\ \underline{-9} \downarrow \\ 09 \\ \underline{-9} \\ 0 \end{array}$$

$$\begin{array}{r} 20 \\ \text{i) } 4 \overline{) 80} \\ \underline{-8} \downarrow \\ 00 \\ \underline{-00} \\ 0 \end{array}$$

5. Divide mentally.

a) $8 \div 4$

Solution:

Let's recall the 4 time table and find out what number when multiplied by 4 equal 8.

$1 \times 4 = 8$
$2 \times 4 = 8$

As $2 \times 4 = 8$, so $8 \div 4 = 2$.

b) $6 \div 3$

Solution:

Let's recall the 3 times table and find out what number when multiplied by 3 equals 6.

$1 \times 3 = 3$
$2 \times 3 = 6$

As $2 \times 3 = 6$, so $6 \div 3 = 2$.

c) $4 \div 2$

Solution:

Let's recall the 2 times table and find out what number when multiplied by 2 equals 4.

$1 \times 2 = 2$
$2 \times 2 = 4$

As $2 \times 2 = 4$, so $4 \div 2 = 2$.

d) $6 \div 2$

Solution:

Let's recall the 2 times table and find out what number when multiplied by 2 equals 6.

$1 \times 2 = 2$
$2 \times 2 = 4$
$3 \times 2 = 6$

As $3 \times 2 = 6$, so $6 \div 2 = 3$.

Learning Check 2.8

1. A teacher divides 84 candies equally among 6 students. How many candies will each student get?

Solution:

$$\text{Total candies} = 84$$

$$\text{Number of students} = 6$$

$$\text{Candies each student gets} = 84 \div 6 = 14$$

So, each student gets 14 candies.

Handwritten division of 84 by 6. The quotient is 14. The steps are: 6 goes into 8 one time, 6 times 1 is 6, 8 minus 6 is 2. Bring down the 4 to make 24. 6 goes into 24 four times, 6 times 4 is 24, 24 minus 24 is 0.

2. The price of 3 storybooks is Rs 90. What is the price of each book?

Solution:

$$\text{Total price of books} = 90$$

$$\text{Number of books} = 3$$

$$\text{Price of each book} = 90 \div 3 = 30$$

So, price of each book is Rs 30.

Handwritten division of 90 by 3. The quotient is 30. The steps are: 3 goes into 9 one time, 3 times 1 is 3, 9 minus 3 is 6. Bring down the 0 to make 60. 3 goes into 6 two times, 3 times 2 is 6, 60 minus 60 is 0.

3. 98 blocks are to be packed in 7 boxes equally. How many blocks will be there in each box?

Solution:

$$\text{Total blocks} = 98$$

$$\text{Number of boxes} = 7$$

$$\text{Blocks in each box} = 98 \div 7 = 14$$

So, there are 14 blocks in each box.

Handwritten division of 98 by 7. The quotient is 14. The steps are: 7 goes into 9 one time, 7 times 1 is 7, 9 minus 7 is 2. Bring down the 8 to make 28. 7 goes into 28 four times, 7 times 4 is 28, 28 minus 28 is 0.

- 4. Rabia saved Rs 96 in a week. She wants to distribute this amount among 8 needy kids. How much will each kid get?**

Solution:

Total amount saved = Rs 96

Number of needy kids = 8

Amount each kid will get = $96 \div 8 = 12$

So, each kid will get Rs 12.

Handwritten long division of 96 by 8. The quotient is 12. The steps are: 8 goes into 9 one time, leaving a remainder of 1. Bring down the 6 to make 16. 8 goes into 16 two times, leaving a remainder of 0.

$$\begin{array}{r} 12 \\ 8 \overline{) 96} \\ \underline{-8} \\ 16 \\ \underline{-16} \\ 0 \end{array}$$

- 5. There are 99 tasbihs in 9 boxes. How many tasbihs are there in each box?**

Solution:

Total tasbih's = 99

Number of boxes = 9

Tasbihs in each box = $99 \div 9 = 11$

So, there are 11 tasbihs in each box.

Handwritten long division of 99 by 9. The quotient is 11. The steps are: 9 goes into 9 one time, leaving a remainder of 0. Bring down the 9 to make 09. 9 goes into 09 one time, leaving a remainder of 0.

$$\begin{array}{r} 11 \\ 9 \overline{) 99} \\ \underline{-9} \\ 09 \\ \underline{-9} \\ 0 \end{array}$$

- 6. There are 84 chocolates in 4 packs. Find the number of chocolates in one pack.**

Solution:

Total chocolates = 84

Number of packs = 4

Chocolates in one pack = $84 \div 4 = 21$

So, there are 21 chocolates in each pack.

Handwritten long division of 84 by 4. The quotient is 21. The steps are: 4 goes into 8 two times, leaving a remainder of 0. Bring down the 4 to make 04. 4 goes into 04 one time, leaving a remainder of 0.

$$\begin{array}{r} 21 \\ 4 \overline{) 84} \\ \underline{-8} \\ 04 \\ \underline{-4} \\ 0 \end{array}$$

Unit Check Division

1. Encircle the correct options.

a) The result of division is called the _____.

i) sum

ii) product

☒ iii) quotient

iv) difference

b) $65 \div 5 =$ _____.

i) 10

ii) 11

iii) 12

☒ iv) 13

c) $93 \div 3 =$ _____.

i) 21

☒ ii) 31

iii) 30

iv) 32

d) When we divide 84 by 7, we get:

i) 9

ii) 10

iii) 11

☒ iv) 12

e) Divide 52 candies between 2 children. How many candies will each child get?

i) 24

ii) 25

☒ iii) 26

iv) 27

2. Dania has 36 pencils. If she puts them in groups of 2, how many groups does she make?



36

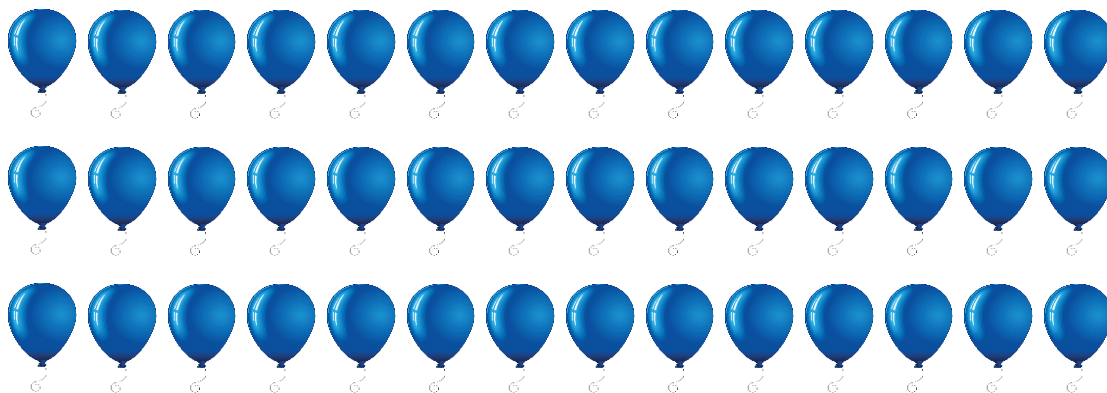
$\div$

2

=

18

3. Divide 42 balloons in 3 groups.



$$\boxed{42} \div \boxed{3} = \boxed{14}$$

4. Divide the following

$$\begin{array}{r} 9 \\ 3 \overline{) 27} \\ \underline{-27} \\ 0 \end{array}$$

$$\begin{array}{r} 12 \\ 8 \overline{) 96} \\ \underline{-8 \downarrow} \\ 16 \\ \underline{-16} \\ 0 \end{array}$$

$$\begin{array}{r} 13 \\ 5 \overline{) 65} \\ \underline{-5 \downarrow} \\ 15 \\ \underline{-15} \\ 0 \end{array}$$

$$\begin{array}{r} 40 \\ 2 \overline{) 80} \\ \underline{-8 \downarrow} \\ 00 \\ \underline{-0} \\ 0 \end{array}$$

$$\begin{array}{r} 11 \\ 9 \overline{) 99} \\ \underline{-9 \downarrow} \\ 09 \\ \underline{-9} \\ 0 \end{array}$$

$$\begin{array}{r} 16 \\ 3 \overline{) 48} \\ \underline{-3 \downarrow} \\ 18 \\ \underline{-18} \\ 0 \end{array}$$

$$\begin{array}{r} 11 \\ 8 \overline{) 88} \\ \underline{-8 \downarrow} \\ 08 \\ \underline{-8} \\ 0 \end{array}$$

$$\begin{array}{r} 11 \\ 6 \overline{) 66} \\ \underline{-6 \downarrow} \\ 06 \\ \underline{-06} \\ 0 \end{array}$$

$$\begin{array}{r} 14 \\ 7 \overline{) 98} \\ \underline{-7 \downarrow} \\ 28 \\ \underline{-28} \\ 0 \end{array}$$

5. Divide mentally.

a) $8 \div 2$

Solution:

Let's recall the 2 time table and find out what number when multiplied by 2 equal 8.

As $4 \times 2 = 8$, so $8 \div 2 = 4$.

$$1 \times 2 = 8$$

$$2 \times 2 = 4$$

$$3 \times 2 = 6$$

$$4 \times 2 = 8$$

b) $4 \div 2$

Solution:

Let's recall the 2 times table and find out what number when multiplied by 2 equals 4.

As $2 \times 2 = 4$, so $4 \div 2 = 2$.

$$1 \times 2 = 2$$

$$2 \times 2 = 4$$

c) $9 \div 3$

Solution:

Let's recall the 3 times table and find out what number when multiplied by 3 equals 9.

As $3 \times 3 = 9$, so $9 \div 3 = 3$.

$$1 \times 3 = 3$$

$$2 \times 3 = 6$$

$$3 \times 3 = 9$$

d) $6 \div 3$

Solution:

Let's recall the 3 times table and find out what number when multiplied by 3 equals 6.

As $2 \times 3 = 6$, so $6 \div 3 = 2$.

$$1 \times 3 = 3$$

$$2 \times 3 = 6$$

6. There are 72 fans in a school. Each classroom has 4 fans. How many classrooms are there?

Solution:

$$\begin{aligned}\text{Total Fan} &= 72 \\ \text{Each classroom has fans} &= 4 \\ \text{Total classrooms} &= 72 \div 4 \\ &= 18\end{aligned}$$

So, 18 classroom has fans.

$$\begin{array}{r} 18 \\ 4 \overline{) 72} \\ \underline{-4} \downarrow \\ 32 \\ \underline{-32} \\ 0 \end{array}$$

7. There are 90 glasses in 6 trays. Find the number of glasses in each tray.

Solution:

$$\begin{aligned}\text{Total glasses} &= 90 \\ \text{Number of trays} &= 6 \\ \text{Glasses in each tray} &= 90 \div 6 \\ &= 15\end{aligned}$$

So, there are 15 glasses in each tray.

$$\begin{array}{r} 15 \\ 6 \overline{) 90} \\ \underline{-6} \downarrow \\ 30 \\ \underline{-30} \\ 0 \end{array}$$

8. Faisal sells 91 kg of dates in a week. How much dates does he sell in a day?

Solution:

$$\begin{aligned}\text{Dates sold in a week} &= 91 \text{ kg} \\ \text{Days in a week} &= 7 \\ \text{Dates sold in a day} &= 91 \div 7 \\ &= 13\end{aligned}$$

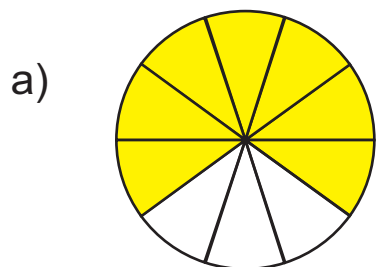
So, 13 kg of dates sold in a day.

$$\begin{array}{r} 13 \\ 7 \overline{) 91} \\ \underline{-7} \downarrow \\ 21 \\ \underline{-21} \\ 0 \end{array}$$

Unit 3: Fractions

Learning Check 3.1

1. Look at the shapes and fill in the boxes. Also write the numerators and the denominators.



$\frac{7}{10}$ of the circle is shaded.

The numerator is 7.

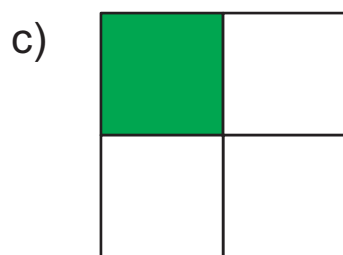
The denominator is 10.



$\frac{3}{5}$ of the rectangle is shaded.

The numerator is 3.

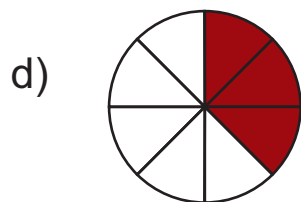
The denominator is 5.



$\frac{1}{4}$ of the square is shaded.

The numerator is 1.

The denominator is 4.

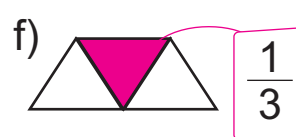
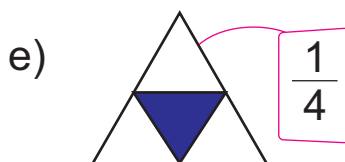
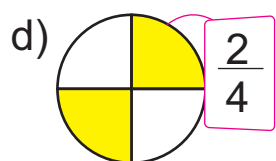
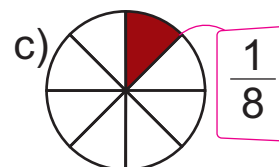
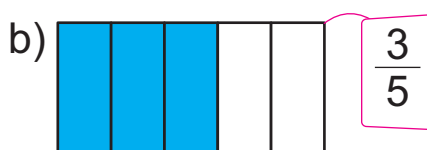
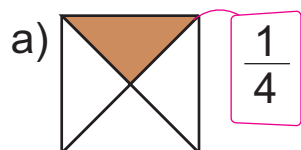


$\frac{3}{8}$ of the circle is shaded.

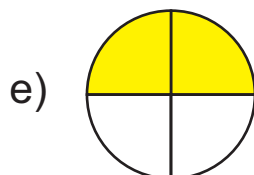
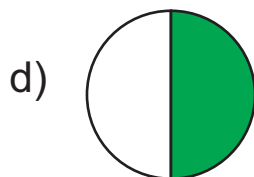
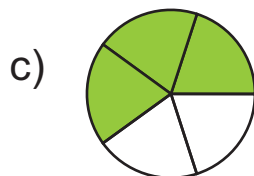
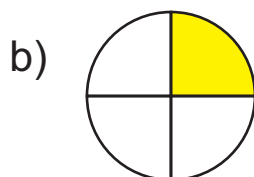
The numerator is 3.

The denominator is 8.

2. Write the fractions for the coloured parts.



3. Match the figures with their correct fractions.



$\frac{2}{4}$

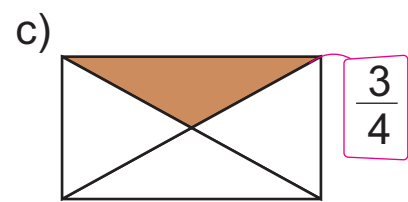
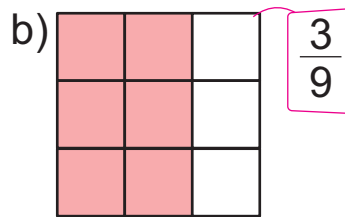
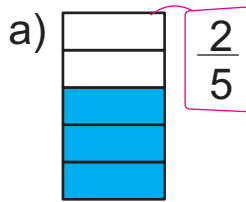
$\frac{1}{5}$

$\frac{1}{4}$

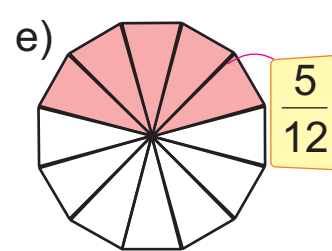
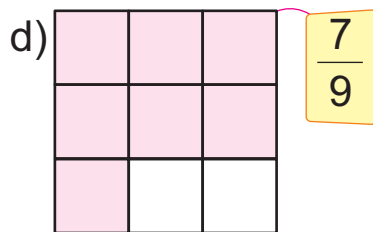
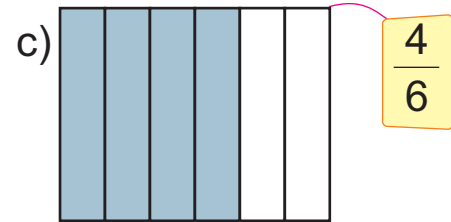
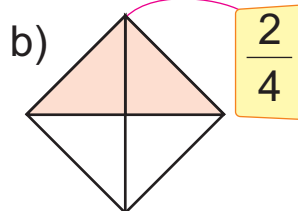
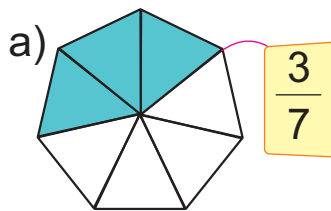
$\frac{3}{5}$

$\frac{1}{2}$

4. Write the fractions for the uncoloured parts.



5. Colour the figures according to the given fractions.



Learning Check 3.2

1. Tick (✓) the correct box for each of these fractions.

a) $\frac{7}{3}$ Proper fraction ✓ Improper fraction

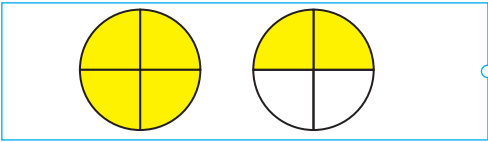
b) $\frac{5}{6}$ Proper fraction Improper fraction

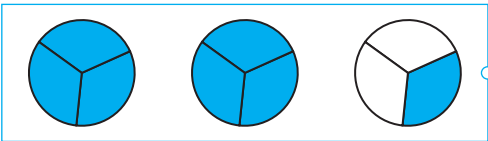
c) $\frac{4}{5}$ Proper fraction Improper fraction

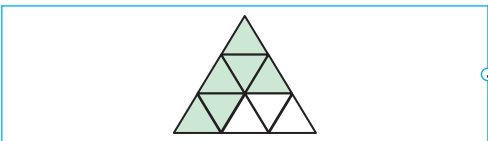
d) $\frac{7}{7}$ Proper fraction ✓ Improper fraction

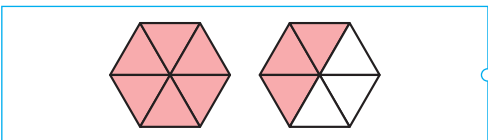
e) $\frac{20}{5}$ Proper fraction ✓ Improper fraction

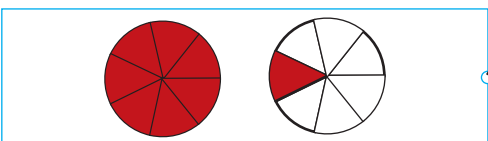
2. Match the figures with their correct fractions. Then circle the improper fractions.

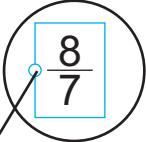
a) 

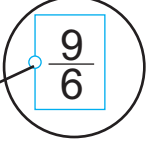
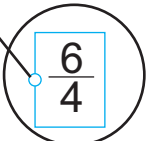
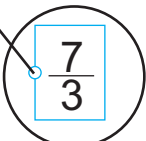
b) 

c) 

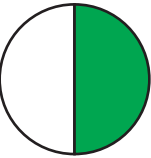
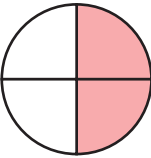
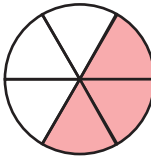
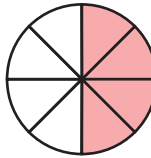
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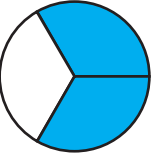
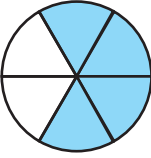
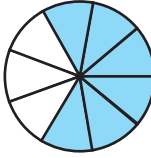
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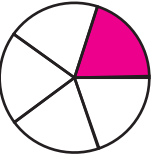
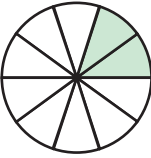


3. Colour the given figures to make them equivalent.

a) $\frac{1}{2} =$  $=$  $=$  $=$ 

b) $\frac{2}{3} =$  $=$  $=$ 

c) $\frac{1}{5} =$  $=$ 

4. Write three equivalent fractions for each of the given fractions.

a) $\frac{5}{7}$

To find equivalent fractions, we multiply the numerator and denominator by the same number.

$$\frac{5}{7} = \frac{5 \times 2}{7 \times 2} = \frac{10}{14} ; \quad \frac{5}{7} = \frac{5 \times 3}{7 \times 3} = \frac{15}{21} ; \quad \frac{5}{7} = \frac{5 \times 4}{7 \times 4} = \frac{20}{28}$$

So, three equivalent fractions for $\frac{5}{7}$ are: $\frac{10}{14}$, $\frac{15}{21}$, $\frac{20}{28}$

b) $\frac{8}{11}$

To find equivalent fractions, we multiply the numerator and denominator by the same number.

$$\frac{8}{11} = \frac{8 \times 2}{11 \times 2} = \frac{16}{22} ; \quad \frac{8}{11} = \frac{8 \times 3}{11 \times 3} = \frac{24}{33} ; \quad \frac{8}{11} = \frac{8 \times 4}{11 \times 4} = \frac{32}{44}$$

So, three equivalent fractions for $\frac{8}{11}$ are: $\frac{16}{22}$, $\frac{24}{33}$, $\frac{32}{44}$

c) $\frac{3}{10}$

To find equivalent fractions, we multiply the numerator and denominator by the same number.

$$\frac{3}{10} = \frac{3 \times 2}{10 \times 2} = \frac{6}{20} ; \quad \frac{3}{10} = \frac{3 \times 3}{10 \times 3} = \frac{9}{30} ; \quad \frac{3}{10} = \frac{3 \times 4}{10 \times 4} = \frac{12}{40}$$

So, three equivalent fractions for $\frac{3}{10}$ are: $\frac{6}{20}$, $\frac{9}{30}$, $\frac{12}{40}$

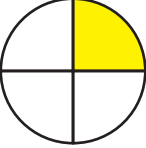
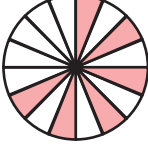
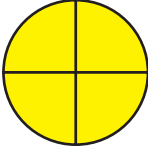
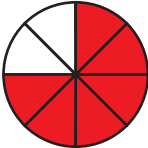
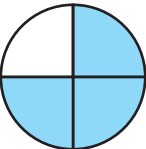
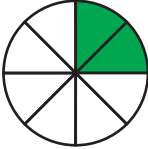
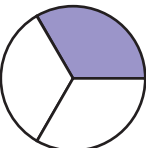
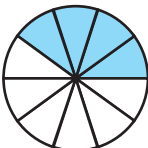
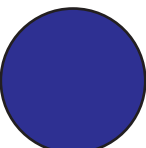
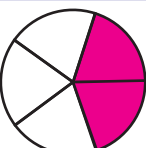
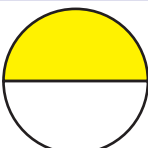
d) $\frac{4}{7}$

To find equivalent fractions, we multiply the numerator and denominator by the same number.

$$\frac{4}{7} = \frac{4 \times 2}{7 \times 2} = \frac{8}{14}; \quad \frac{4}{7} = \frac{4 \times 3}{7 \times 3} = \frac{12}{21}; \quad \frac{4}{7} = \frac{4 \times 4}{7 \times 4} = \frac{16}{28}$$

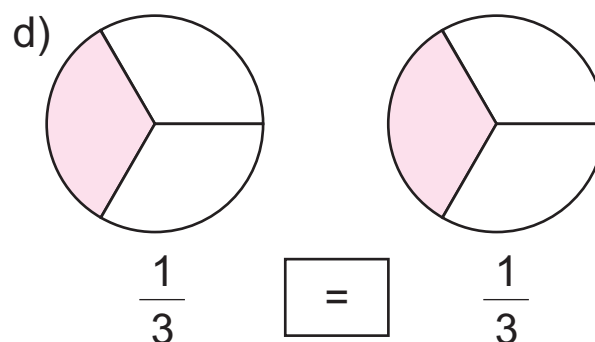
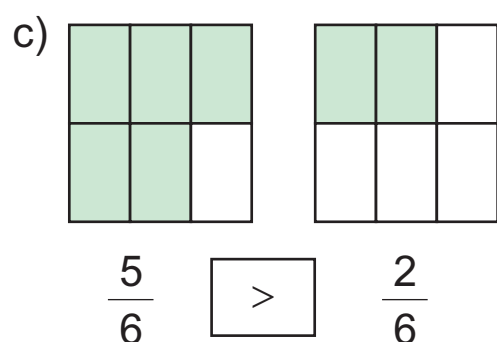
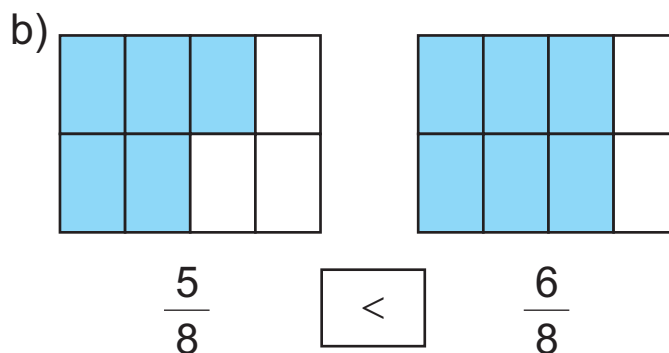
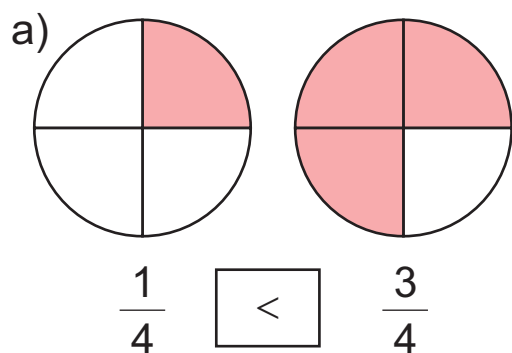
So, three equivalent fractions for $\frac{4}{7}$ are: $\frac{8}{14}$, $\frac{12}{21}$, $\frac{16}{28}$

5. Match the equivalent fractions.

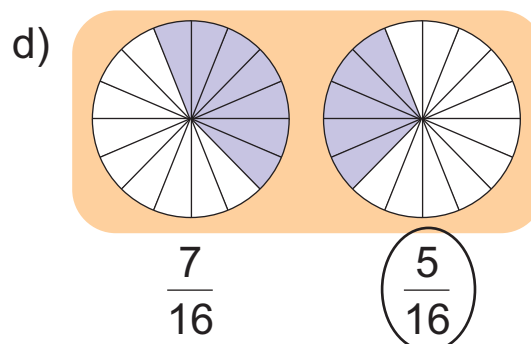
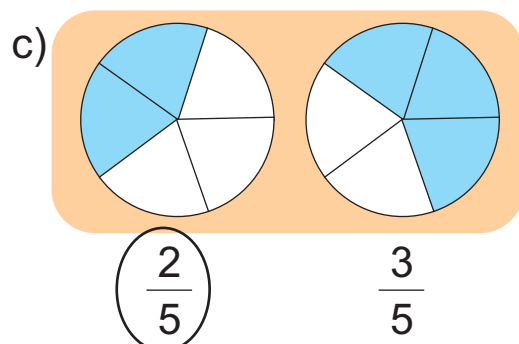
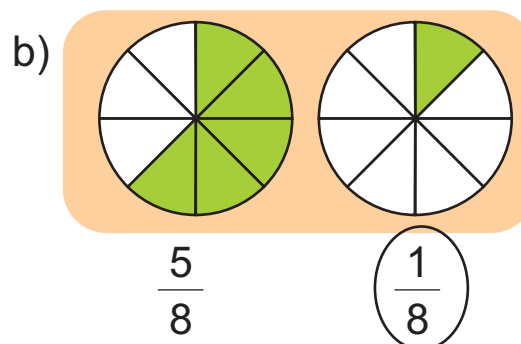
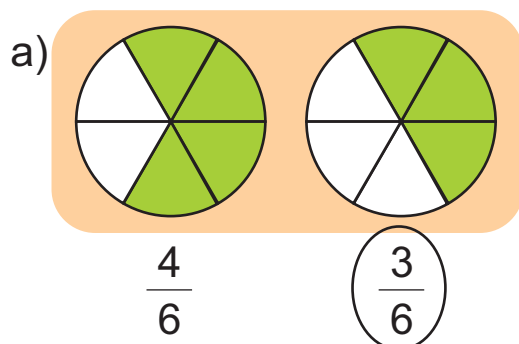
 $\frac{1}{4}$	 $\frac{6}{16}$
 $\frac{3}{6}$	 $\frac{4}{4}$
 $\frac{3}{8}$	 $\frac{6}{8}$
 $\frac{3}{4}$	 $\frac{2}{8}$
 $\frac{1}{3}$	 $\frac{4}{10}$
 1	 $\frac{2}{6}$
 $\frac{2}{5}$	 $\frac{1}{2}$

Learning Check 3.3

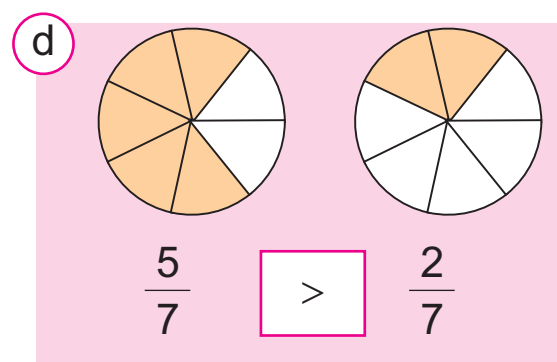
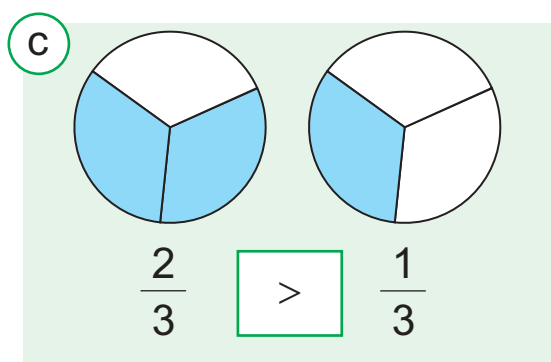
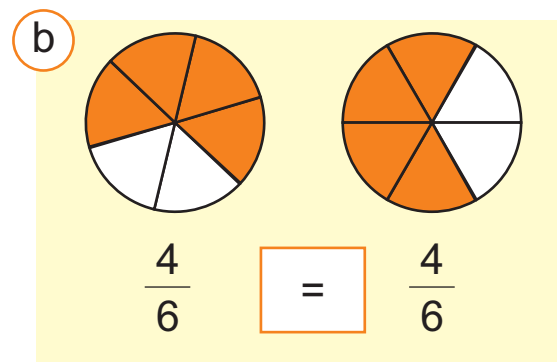
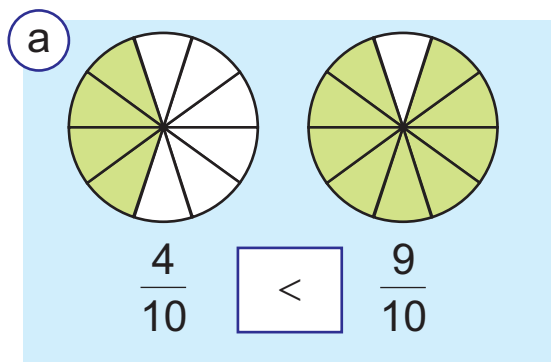
1. Colour the shapes according to the given fractions and then use $<$, $>$ or $=$ to compare them.



2. Compare and circle the smaller fractions.



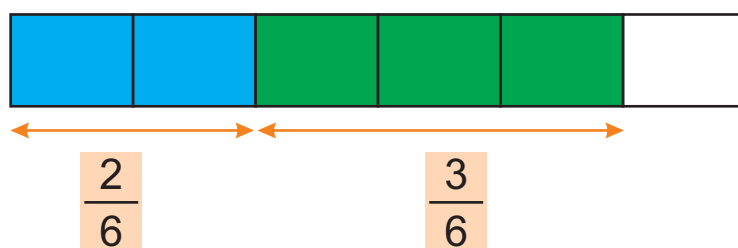
3. Compare and write $<$, $>$ or $=$ in the boxes.



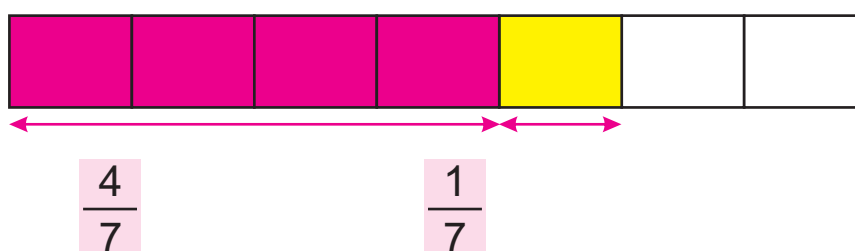
Learning Check 3.4

1. Add the fractions and colour the shapes.

a) $\frac{2}{6} + \frac{3}{6} = \frac{5}{6}$



b) $\frac{4}{7} + \frac{1}{7} = \frac{5}{7}$



2. Add the following fractions.

$$\text{a) } \frac{1}{4} + \frac{1}{4} = \frac{\boxed{}}{\boxed{}}$$

Solution:

As the denominator same just add the numerators and keep the denominators same, so

$$\frac{1}{4} + \frac{1}{4} = \frac{1+1}{4} = \frac{2}{4}$$

$$\text{b) } \frac{2}{7} + \frac{3}{7} = \frac{\boxed{}}{\boxed{}}$$

Solution:

As the denominator same just add the numerators and keep the denominators same, so

$$\frac{2}{7} + \frac{3}{7} = \frac{2+3}{7} = \frac{5}{7}$$

$$\text{c) } \frac{8}{11} + \frac{1}{11} = \frac{\boxed{}}{\boxed{}}$$

Solution:

As the denominator same just add the numerators and keep the denominators same, so

$$\frac{8}{11} + \frac{1}{11} = \frac{8+1}{11} = \frac{9}{11}$$

$$\text{d) } \frac{1}{9} + \frac{4}{9} = \frac{\boxed{}}{\boxed{}}$$

Solution:

As the denominator same just add the numerators and keep the denominators same, so

$$\frac{1}{9} + \frac{4}{9} = \frac{1+4}{9} = \frac{5}{9}$$

$$e) \frac{5}{8} + \frac{2}{8} = \frac{\boxed{}}{\boxed{}}$$

Solution:

As the denominator same just add the numerators and keep the denominators same, so

$$\frac{5}{8} + \frac{2}{8} = \frac{5+2}{8} = \frac{7}{8}$$

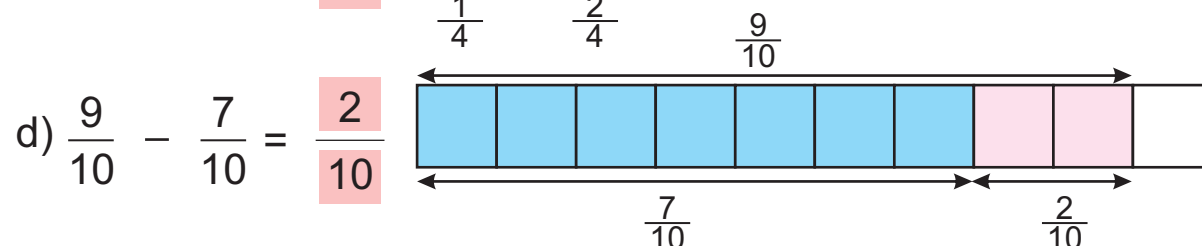
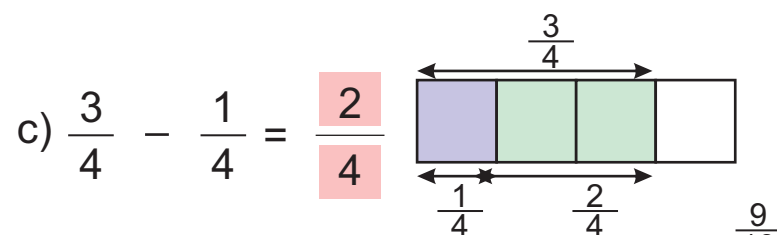
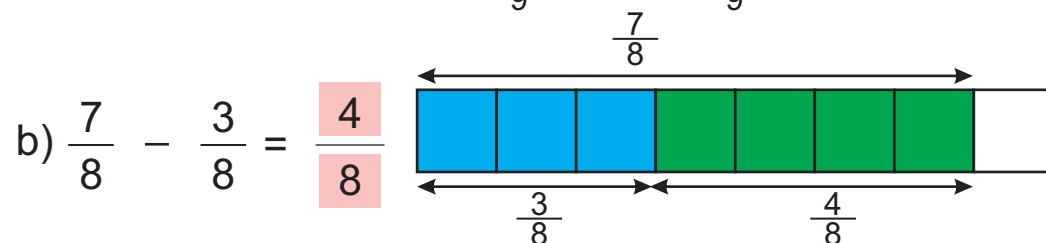
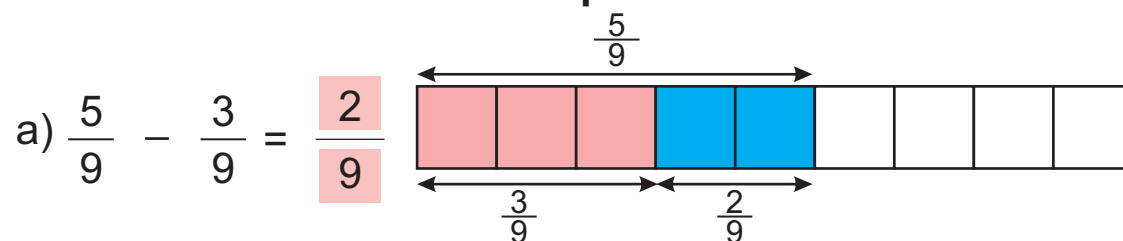
$$f) \frac{3}{6} + \frac{2}{6} = \frac{\boxed{}}{\boxed{}}$$

Solution:

As the denominator same just add the numerators and keep the denominators same, so

$$\frac{3}{6} + \frac{2}{6} = \frac{3+2}{6} = \frac{5}{6}$$

3. Subtract and colour the shapes.



4. Solve the following.

$$\text{a) } \frac{3}{4} - \frac{1}{4} = \frac{\boxed{}}{\boxed{}}$$

Solution:

As the denominators are same, we will simply subtract the numerators and keep the denominators same.

$$\frac{3}{4} - \frac{1}{4} = \frac{3-1}{4} = \frac{2}{4}$$

$$\text{b) } \frac{7}{12} - \frac{5}{12} = \frac{\boxed{}}{\boxed{}}$$

Solution:

As the denominators are same, we will simply subtract the numerators and keep the denominators same.

$$\frac{7}{12} - \frac{5}{12} = \frac{7-5}{12} = \frac{2}{12}$$

$$\text{c) } \frac{3}{5} - \frac{1}{5} = \frac{\boxed{}}{\boxed{}}$$

Solution:

As the denominators are same, we will simply subtract the numerators and keep the denominators same.

$$\frac{3}{5} - \frac{1}{5} = \frac{3-1}{5} = \frac{2}{5}$$

$$\text{d) } \frac{2}{3} - \frac{1}{3} = \frac{\boxed{}}{\boxed{}}$$

Solution:

As the denominators are same, we will simply subtract the numerators and keep the denominators same.

$$\frac{2}{3} - \frac{1}{3} = \frac{2-1}{3} = \frac{1}{3}$$

$$\text{e) } \frac{3}{4} - \frac{2}{4} = \frac{\boxed{}}{\boxed{}}$$

Solution:

As the denominators are same, we will simply subtract the numerators and keep the denominators same.

$$\frac{3}{4} - \frac{2}{4} = \frac{3-2}{4} = \frac{1}{4}$$

$$\text{f) } \frac{4}{6} - \frac{3}{6} = \frac{\boxed{}}{\boxed{}}$$

Solution:

As the denominators are same, we will simply subtract the numerators and keep the denominators same.

$$\frac{4}{6} - \frac{3}{6} = \frac{4-3}{6} = \frac{1}{6}$$

Unit Check

1. Encircle the correct options.

a) The fraction with the numerator 4.

i) $\frac{1}{4}$

ii) $\frac{4}{5}$

iii) $\frac{3}{4}$

iv) $\frac{7}{4}$

b) _____ is a proper fraction.

i) $\frac{2}{3}$

ii) $\frac{7}{5}$

iii) $\frac{9}{4}$

iv) $\frac{11}{4}$

c) _____ is an improper fraction.

i) $\frac{1}{7}$

ii) $\frac{1}{2}$

iii) $\frac{5}{6}$

iv) $\frac{7}{4}$

d) The equivalent fraction for $\frac{3}{4}$.

i) $\frac{6}{8}$

ii) $\frac{6}{4}$

iii) $\frac{3}{8}$

iv) $\frac{9}{8}$

e) The sum of $\frac{2}{7}$ and $\frac{3}{7}$.

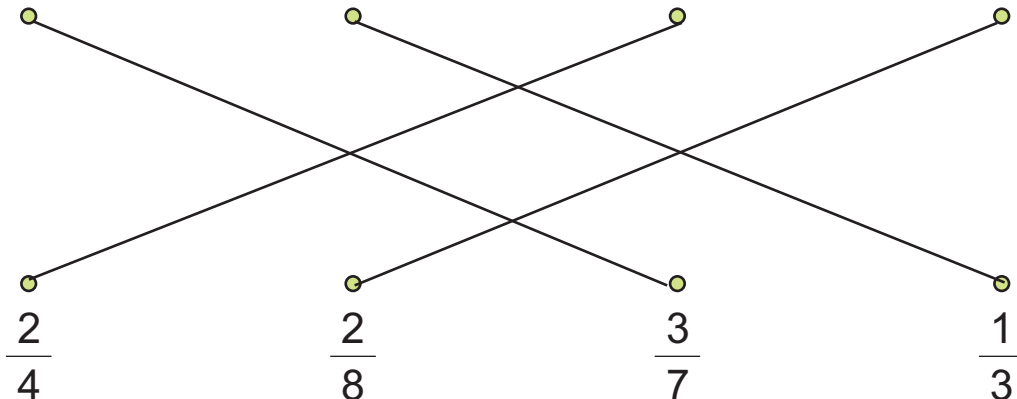
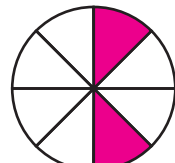
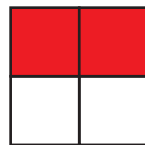
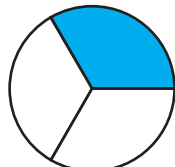
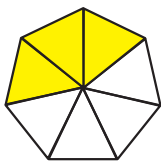
i) $\frac{1}{7}$

ii) $\frac{5}{7}$

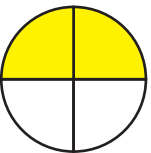
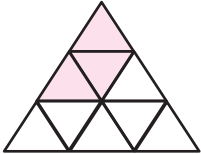
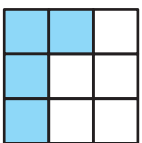
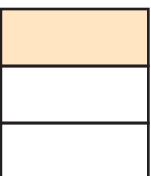
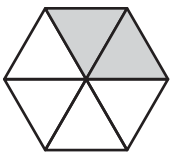
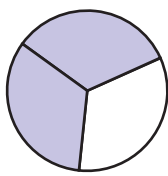
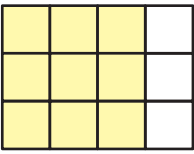
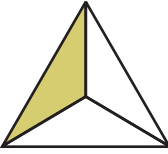
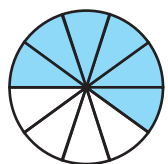
iii) $\frac{2}{7}$

iv) $\frac{6}{7}$

2. Match the figures with their correct fractions.



3. Colour the shapes according to the fractions given.

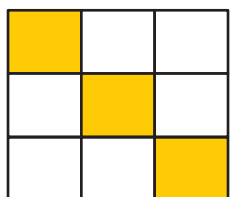
a) $\frac{2}{4} =$ 	b) $\frac{3}{9} =$ 	c) $\frac{4}{9} =$ 
d) $\frac{1}{3} =$ 	e) $\frac{2}{6} =$ 	f) $\frac{2}{3} =$ 
g) $\frac{9}{12} =$ 	h) $\frac{1}{3} =$ 	i) $\frac{6}{10} =$ 

4. Look at the shapes and fill in the boxes. Also write their numerators and denominators.

a)  $\frac{\boxed{2}}{\boxed{9}}$ of the triangle is shaded.

The numerator is 2.

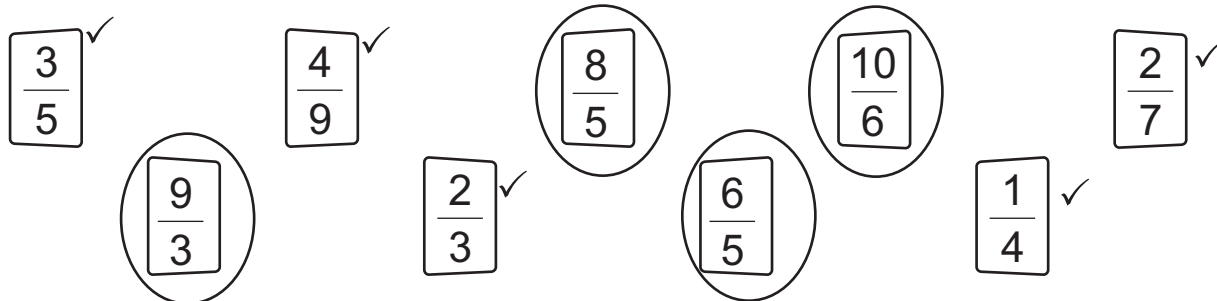
The denominator is 9.

b)  $\frac{\boxed{3}}{\boxed{9}}$ of the square is shaded.

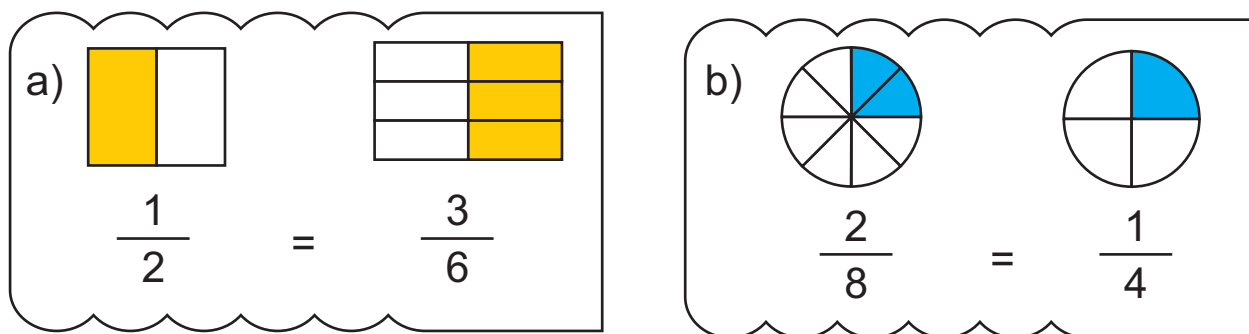
The numerator is 3.

The denominator is 9.

5. Tick (✓) the proper fractions and circle the improper fractions.



6. Look at the given figures and write the equivalent fractions for each of these.



7. Write 3 equivalent fractions for each of the following.

a) $\frac{5}{9}$

To find equivalent fractions, we multiply the numerator and denominator by the same number.

$$\frac{5}{9} = \frac{5 \times 2}{9 \times 2} = \frac{10}{18} ; \frac{5}{9} = \frac{5 \times 3}{9 \times 3} = \frac{15}{27} ; \frac{5}{9} = \frac{5 \times 4}{9 \times 4} = \frac{20}{36}$$

So, three equivalent fractions for $\frac{5}{9}$ are: $\frac{10}{18}$, $\frac{15}{27}$, $\frac{20}{36}$

b) $\frac{2}{3}$

To find equivalent fractions, we multiply the numerator and denominator by the same number.

$$\frac{2}{3} = \frac{2 \times 2}{3 \times 2} = \frac{4}{6} ; \frac{2}{3} = \frac{2 \times 3}{3 \times 3} = \frac{6}{9} ; \frac{2}{3} = \frac{2 \times 4}{3 \times 4} = \frac{8}{12}$$

So, three equivalent fractions for $\frac{2}{3}$ are: $\frac{4}{6}$, $\frac{6}{9}$, $\frac{8}{12}$

c) $\frac{3}{7}$

To find equivalent fractions, we multiply the numerator and denominator by the same number.

$$\frac{3}{7} = \frac{3 \times 2}{7 \times 2} = \frac{6}{14}; \quad \frac{3}{7} = \frac{3 \times 3}{7 \times 3} = \frac{9}{21}; \quad \frac{3}{7} = \frac{3 \times 4}{7 \times 4} = \frac{12}{28}$$

So, three equivalent fractions for $\frac{3}{7}$ are: $\frac{6}{14}, \frac{9}{21}, \frac{12}{28}$

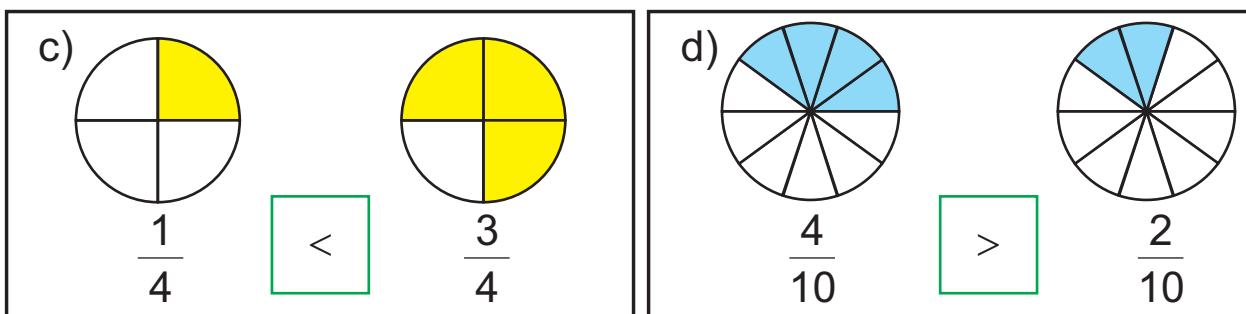
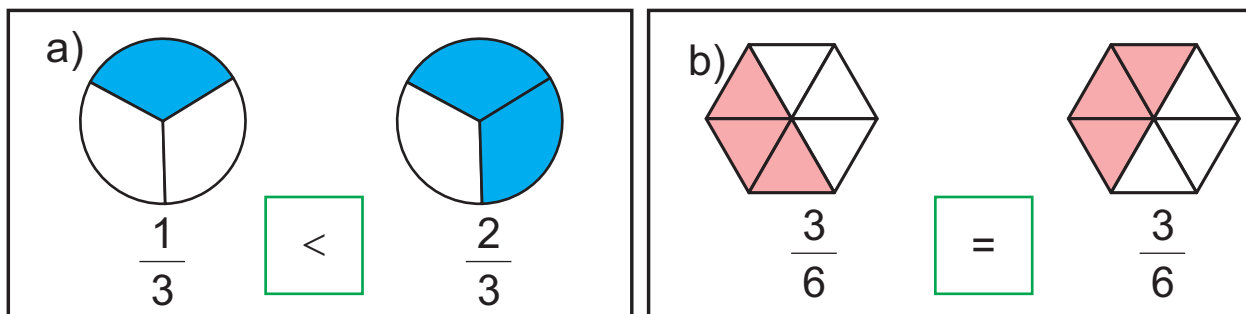
d) $\frac{4}{6}$

To find equivalent fractions, we multiply the numerator and denominator by the same number.

$$\frac{4}{6} = \frac{4 \times 2}{6 \times 2} = \frac{8}{12}; \quad \frac{4}{6} = \frac{4 \times 3}{6 \times 3} = \frac{12}{18}; \quad \frac{4}{6} = \frac{4 \times 4}{6 \times 4} = \frac{16}{24}$$

So, three equivalent fractions for $\frac{4}{6}$ are: $\frac{8}{12}, \frac{12}{18}, \frac{16}{24}$

8. Compare and write $<$, $>$ or $=$ for each of these.



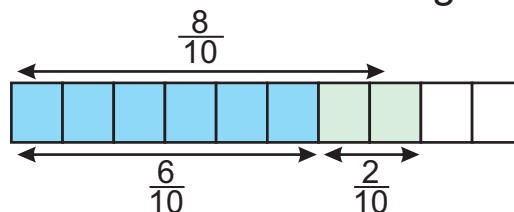
9. Add the following fractions. Express using figures.

a) $\frac{6}{10} + \frac{2}{10} = \frac{\boxed{}}{\boxed{}}$

Solution:

As the denominators are same, simply add the numerators together and leave the denominators as it is.

$$\frac{6}{10} + \frac{2}{10} = \frac{6+2}{10} = \frac{8}{10}$$

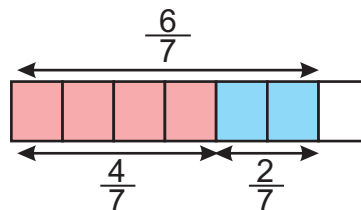


b) $\frac{4}{7} + \frac{2}{7} = \frac{\boxed{}}{\boxed{}}$

Solution:

As the denominators are same, simply add the numerators together and leave the denominators as it is.

$$\frac{4}{7} + \frac{2}{7} = \frac{4+2}{7} = \frac{6}{7}$$

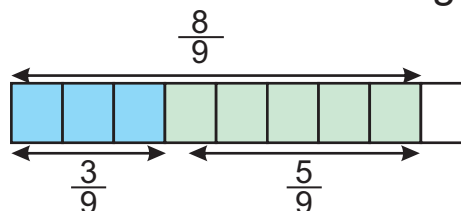


c) $\frac{3}{9} + \frac{5}{9} = \frac{\boxed{}}{\boxed{}}$

Solution:

As the denominators are same, simply add the numerators together and leave the denominators as it is.

$$\frac{3}{9} + \frac{5}{9} = \frac{3+5}{9} = \frac{8}{9}$$

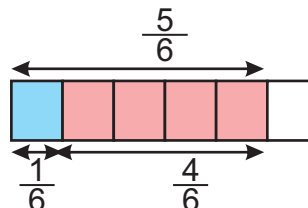


d) $\frac{1}{6} + \frac{4}{6} = \frac{\boxed{}}{\boxed{}}$

Solution:

As the denominators are same, simply add the numerators together and leave the denominators as it is.

$$\frac{1}{6} + \frac{4}{6} = \frac{1+4}{6} = \frac{5}{6}$$



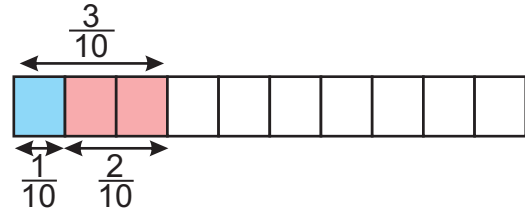
10. Subtract the following fractions. Express using figures.

a) $\frac{3}{10} - \frac{1}{10} = \frac{\boxed{}}{\boxed{}}$

Solution:

As the denominators are same, simply subtract the numerators and leave the denominators as it is.

$$\frac{3}{10} - \frac{1}{10} = \frac{3-1}{10} = \frac{2}{10}$$

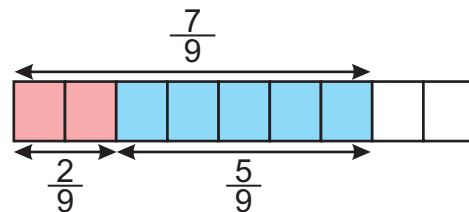


b) $\frac{7}{9} - \frac{2}{9} = \frac{\boxed{}}{\boxed{}}$

Solution:

As the denominators are same, simply subtract the numerators and leave the denominators as it is.

$$\frac{7}{9} - \frac{2}{9} = \frac{7-2}{9} = \frac{5}{9}$$

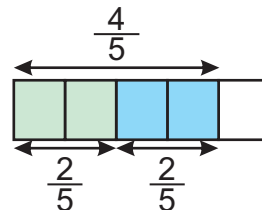


c) $\frac{4}{5} - \frac{2}{5} = \frac{\boxed{}}{\boxed{}}$

Solution:

As the denominators are same, simply subtract the numerators and leave the denominators as it is.

$$\frac{4}{5} - \frac{2}{5} = \frac{4-2}{5} = \frac{2}{5}$$

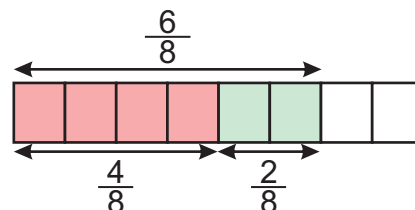


d) $\frac{6}{8} - \frac{4}{8} = \frac{\boxed{}}{\boxed{}}$

Solution:

As the denominators are same, simply subtract the numerators and leave the denominators as it is.

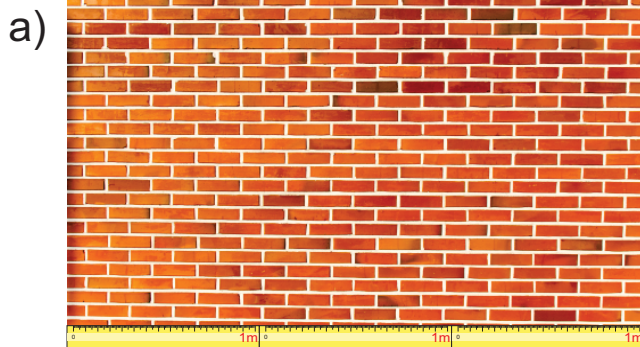
$$\frac{6}{8} - \frac{4}{8} = \frac{6-4}{8} = \frac{2}{8}$$



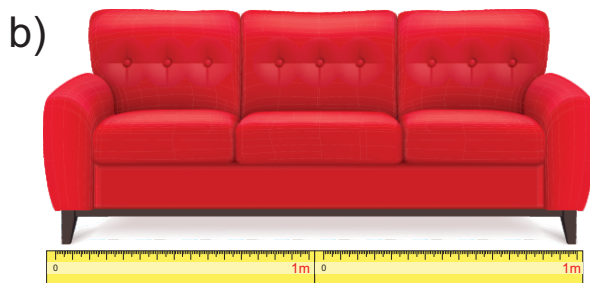
Unit 4: Measurement

Learning Check 4.1

1. Measure and write the lengths of the given objects in metres.

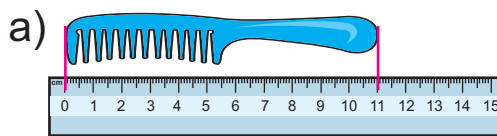


The length of the wall is 3 m.

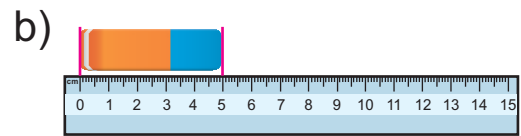


The length of the sofa is 2 m.

2. Measure and write the lengths of the given objects in centimetres.



The length of the comb is 11 cm.



The length of the eraser is 5 cm.

3. Write the correct units to measure these lengths.



The distance between two cities is measured in km.



The length of a ribbon is measured in m.

c)



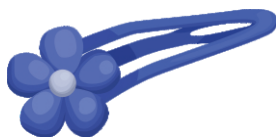
The length of a classroom is measured in m.

d)



The length of a paper clip is measured in cm.

e)



The length of a hairpin is measured in cm.

f)



The height of a tree is measured in m.

Learning Check 4.2

1. Add the following.

a)

56 m	17 cm
+ 22 m 10 cm	
78 m	27 cm

b)

76 km	104 m
+ 13 km 152 m	
89 km	256 m

c)

50 m	34 cm
+ 40 m 20 cm	
90 m	54 cm

d)

32 km	150 m
+ 17 km 446 m	
49 km	596 m

e)

6 m	62 cm
+ 2 m 15 cm	
8 m	77 cm

f)

48 km	003 m
+ 51 km 565 m	
99 km	568 m

- 2. The train station is 1 km 450 m away from Ali's home and the bus station is 2 km 320 m away from the train station. Find the total distance from Ali's home to the bus station.**

Solution

$$\text{Distance of train station from Ali's home} = 1 \text{ km } 450 \text{ m}$$

$$\text{Distance of bus station from train station} = + 2 \text{ km } 320 \text{ m}$$

$$\text{Total distance from Ali's home to the bus station} = 3 \text{ km } 770 \text{ m}$$

So, the total distance from Ali's home to the bus station is 3 km 770 m.

- 3. Fozia is wrapping gifts for her friend. She ties 29 cm of ribbon around one gift box and ties 50 cm of ribbon around another gift box. How much ribbon does she use altogether?**

Solution

$$\text{Ribbon tied around one gift box} = 29 \text{ cm}$$

$$\text{Ribbon ties around another gift box} = + 50 \text{ cm}$$

$$\text{Total ribbon used altogether} = 79 \text{ cm}$$

So, she use 79 cm ribbon altogether.

- 4. The length of a chain is 2 m 37 cm and the length of another chain is 3 m 12 cm. What is the total length of both chains?**

Solution

$$\text{Length of one chain} = 2 \text{ m } 37 \text{ cm}$$

$$\text{Length of another chain} = + 3 \text{ m } 12 \text{ cm}$$

$$\text{Total length} = 5 \text{ m } 49 \text{ cm}$$

So, total length of both chain is 5 m 49 cm altogether

Learning Check 4.3

1. Subtract the following.

a)

79 km 209 m
– 56 km 108 m
23 km 101 m

b)

63 m 54 cm
– 13 m 52 cm
50 m 02 cm

c)

89 km 139 m
– 14 km 103 m
75 km 036 m

d)

45 m 97 cm
– 12 m 46 cm
33 m 51 cm

e)

96 km 345 m
– 80 km 115 m
16 km 230 m

f)

50 m 50 cm
– 40 m 40 cm
10 m 10 cm

2. Hadeed covered 3 km 329 m on Saturday and 2 km 234 m on Sunday while jogging. On which day does he jog more and by how much?

Solution

Distance covered on Saturday = 3 km 329 m

Distance covered on Sunday = – 2 km 234 m

More distance covered on Saturday = 1 km 95 m

So, Hadeed covered 1 km 95 m more distance on Saturday than on Sunday.

- 3. The distance from City A to City B is about 322 km 20 m and the distance from City C to City B is about 376 km 55 m. Which city is nearer to City B and by how much?**

Solution

Distance from City C to City B = 376 km 55 m

Distance from City A to City B = 322 km 20 m

Less distance for City A to City B than from City C to City B = 054 km 35 m

So, City A is 54 km 35 m nearer to City B than from City C.

- 4. The width of the main gate of a house is 3 m 95 cm and the width of the entrance door is 1 m 85 cm. Find the difference between the length of the two.**

Solution

Width of main gate of house = 3 m 95 cm

Width of entrance door of house = 1 m 85 cm

Difference in their widths = 2 m 10 cm

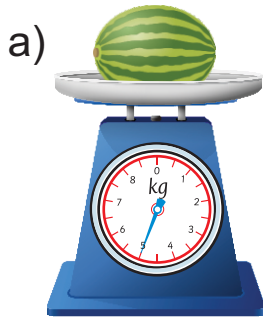
So, the difference between their widths is 2 m 10 cm.

Learning Check 4.4

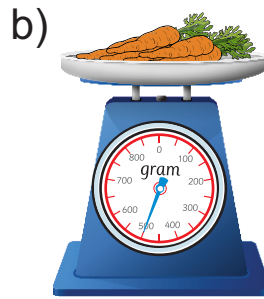
- 1. Encircle the appropriate unit of mass to weigh these objects.**

A watermelon	g	(kg)
A crate of vegetables	g	(kg)
An almond	(g)	kg
A chair	g	(kg)
A cupcake	(g)	kg

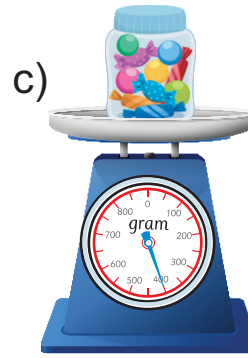
2. Write the mass of these objects.



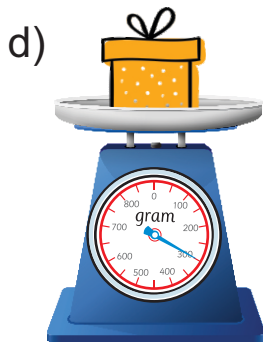
5 kg



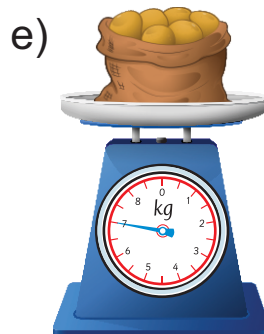
500 g



400 g



300 g



7 kg



850 g

Learning Check 4.5

1. Add the following.

a)

$$\begin{array}{r} 23 \text{ kg } 209 \text{ g} \\ + 14 \text{ kg } 340 \text{ g} \\ \hline 37 \text{ kg } 549 \text{ g} \end{array}$$

b)

$$\begin{array}{r} 14 \text{ kg } 500 \text{ g} \\ + 34 \text{ kg } 276 \text{ g} \\ \hline 48 \text{ kg } 776 \text{ g} \end{array}$$

c)

$$\begin{array}{r} 65 \text{ kg } 194 \text{ g} \\ + 24 \text{ kg } 100 \text{ g} \\ \hline 89 \text{ kg } 294 \text{ g} \end{array}$$

d)

$$\begin{array}{r} 82 \text{ kg } 490 \text{ g} \\ + 12 \text{ kg } 204 \text{ g} \\ \hline 94 \text{ kg } 694 \text{ g} \end{array}$$

e)

$$\begin{array}{r} 55 \text{ kg } 122 \text{ g} \\ + 30 \text{ kg } 306 \text{ g} \\ \hline 85 \text{ kg } 428 \text{ g} \end{array}$$

f)

$$\begin{array}{r} 20 \text{ kg } 113 \text{ g} \\ + 40 \text{ kg } 455 \text{ g} \\ \hline 60 \text{ kg } 568 \text{ g} \end{array}$$

- 2. The mass of a basket of apples is 15 kg 323 g and a basket of mangoes is 10 kg 445 g. What is the mass of both baskets altogether?**

Solution

$$\text{Mass of basket of apples} = 15 \text{ kg } 323 \text{ g}$$

$$\text{Mass of basket of mangoes} = + 10 \text{ kg } 445 \text{ g}$$

$$\text{Total mass altogether} = 25 \text{ kg } 768 \text{ g}$$

So, the total mass is 25 kg 768 g altogether.

- 3. Rabia bought 1 kg 500 g of cheese and 2 kg 200 g of butter. Find the total mass of butter and cheese she bought.**

Solution

$$\text{Mass of cheese bought} = 1 \text{ kg } 500 \text{ g}$$

$$\text{Mass of butter bought} = + 2 \text{ kg } 200 \text{ g}$$

$$\text{Total mass} = 3 \text{ kg } 700 \text{ g}$$

So, the total mass of butter and cheese is 3 kg 700 g.

- 4. The mass of a cupboard is 22 kg 450 g and the mass of a table is 6 kg 340 g. What is the total mass of the cupboard and table?**

Solution

$$\text{Mass of cupboard} = 22 \text{ kg } 450 \text{ g}$$

$$\text{Mass of table} = + 6 \text{ kg } 340 \text{ g}$$

$$\text{Total mass} = 28 \text{ kg } 790 \text{ g}$$

So, the total mass is 28 kg 790 g.

5. A shopkeeper has 56 kg 750 g of flour and 32 kg 145 g of grain in stock. Find the total mass of flour and grain he has in stock.

Solution

$$\text{Mass of flour} = 56 \text{ kg } 750 \text{ g}$$

$$\text{Mass of grain} = + 32 \text{ kg } 145 \text{ g}$$

$$\text{Total mass altogether} = 88 \text{ kg } 895 \text{ g}$$

So, the total mass is 88 kg 895 g.

Learning Check 4.6

1. Subtract the following.

a)

28 kg 308 g
– 20 kg 105 g
08 kg 203 g

b)

69 kg 478g
– 38 kg 258 g
31 kg 220 g

c)

89 kg 455 g
– 14 kg 311 g
75 kg 144 g

d)

66 kg 666 g
– 55 kg 444 g
11 kg 222 g

e)

75 kg 798 g
– 5 kg 008 g
70 kg 790 g

f)

54 kg 578 g
– 24 kg 325 g
30 kg 253 g

2. A crate has 59 kg 324 g of mangoes. 32 kg 214 g of mangoes are sold. What mass of mangoes are left?

Solution

$$\text{Mass of mangoes} = 59 \text{ kg } 324 \text{ g}$$

$$\text{Mass of mangoes sold} = - 32 \text{ kg } 214 \text{ g}$$

$$\text{Mass of mangoes left} = 27 \text{ kg } 110 \text{ g}$$

So, 27 kg 110 g of mangoes are left.

3. A shopkeeper had 98 kg 599 g of sugar. He sold 60 kg 390 g of it. Find the amount of sugar left.

Solution

$$\text{Total mass of sugar} = 98 \text{ kg } 599 \text{ g}$$

$$\text{Mass of sugar sold} = - 60 \text{ kg } 390 \text{ g}$$

$$\text{Mass of sugar left} = 38 \text{ kg } 209 \text{ g}$$

So, 38 kg 209 g of sugar left.

4. Last year, the mass of Ahad was 38 kg 210 g. Now his mass is 49 kg 850 g. How much weight did he gain in a year?

Solution

$$\text{Current mass of Ahad} = 49 \text{ kg } 850 \text{ g}$$

$$\text{Mass of Ahad last year} = - 38 \text{ kg } 210 \text{ g}$$

$$\text{Mass gain in 1 year} = 11 \text{ kg } 640 \text{ g}$$

So, he gained 11 kg 640 g in a year.

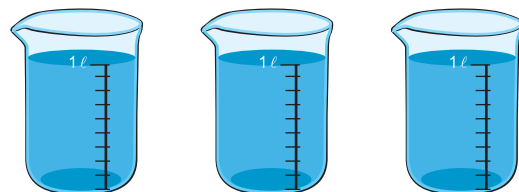
Learning Check 4.7

1. Circle the appropriate unit of capacity to measure these objects.

Capacity of an inkpot	<i>l</i>	ml
Capacity of a water tank	l	ml
Capacity of an aquarium	l	ml
Capacity of a spoon	<i>l</i>	ml
Capacity of a dropper	<i>l</i>	ml

2. Write the capacity of these containers.

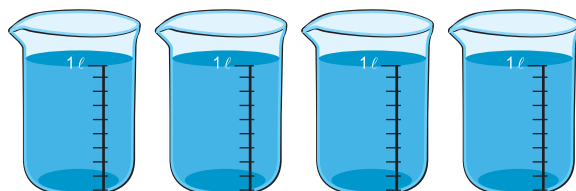
a)



3

litres

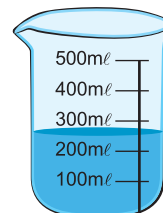
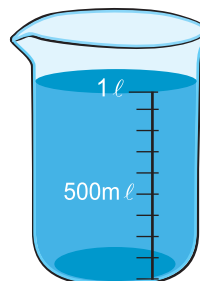
b)



4

litres

c)



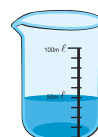
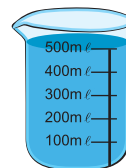
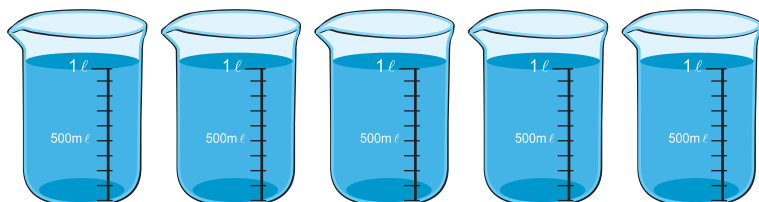
1

ℓ

250

ml.

d)



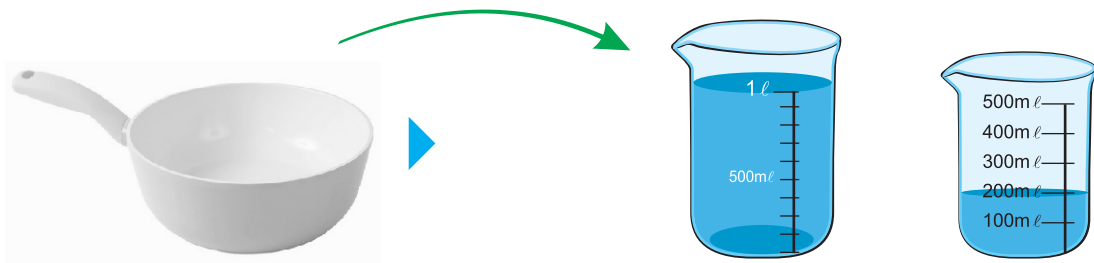
5

ℓ

550

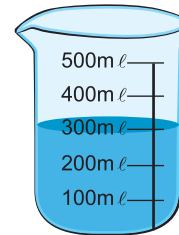
ml.

e)



1 ℓ 200 mℓ.

f)



0 ℓ 300 mℓ.

Learning Check 4.8

1. Solve the following.

a)

12 ℓ 232 mℓ
+ 10 ℓ 456 mℓ
22 ℓ 688 mℓ

b)

76 ℓ 315 mℓ
+ 22 ℓ 443 mℓ
98 ℓ 758 mℓ

c)

44 ℓ 233 mℓ
+ 23 ℓ 564 mℓ
67 ℓ 797 mℓ

d)

65 ℓ 125 mℓ
+ 13 ℓ 521 mℓ
78 ℓ 646 mℓ

e)

36 ℓ 122 mℓ
+ 20 ℓ 331 mℓ
56 ℓ 453 mℓ

f)

51 ℓ 412 mℓ
+ 13 ℓ 175 mℓ
64 ℓ 587 mℓ

- 2. Ahmad bought 17 ℓ 400 ml of paint for his house and 12 ℓ 100 ml of paint for his shop. Find the total volume of paint he bought.**

Solution:

$$\text{Volume of paint bought for house} = 17 \ell 400 \text{ ml}$$

$$\text{Volume of paint bought for shop} = + \quad 12 \ell 100 \text{ ml}$$

$$\text{Total paint bought} = \quad 29 \ell 500 \text{ ml}$$

So, the total volume of paint bought is 29 ℓ 500 ml.

- 3. A shopkeeper sold 40 ℓ 230 ml of ice cream on Sunday and 26 ℓ 437 ml of ice cream on the following Sunday. Find the total volume he sold both Sundays.**

Solution:

$$\text{Ice-cream sold on Sunday} = 40 \ell 230 \text{ ml}$$

$$\text{Ice-cream sold on next Sunday} = + \quad 26 \ell 437 \text{ ml}$$

$$\text{Total paint bought} = \quad 66 \ell 667 \text{ ml}$$

So, 66 ℓ 667 ml of ice-cream is sold on both Sundays altogether.

- 4. A container has a capacity of 60 ℓ 845 ml and the another container has a capacity of 39 ℓ 123 ml. Find the total capacity of both containers.**

Solution:

$$\text{Capacity of one container} = 60 \ell 845 \text{ ml}$$

$$\text{Capacity of another container} = + \quad 39 \ell 123 \text{ ml}$$

$$\text{Total capacity of both containers} = \quad 99 \ell 968 \text{ ml}$$

So, total capacity of both containers is 99 ℓ 968 ml.

Learning Check 4.9

1. Solve the following.

a)

	56 ℓ 345 ml
–	25 ℓ 211 ml
	31 ℓ 134 ml

b)

	49 ℓ 324 ml
–	36 ℓ 100 ml
	13 ℓ 224 ml

c)

	23 ℓ 700 ml
–	11 ℓ 400 ml
	12 ℓ 300 ml

d)

	78 ℓ 569 ml
–	47 ℓ 523 ml
	31 ℓ 046 ml

e)

	38 ℓ 823 ml
–	12 ℓ 123 ml
	26 ℓ 700 ml

f)

	90 ℓ 679 ml
–	40 ℓ 568 ml
	50 ℓ 111 ml

2. Zahid filled 34 ℓ 675 ml of petrol in his car. He used 23 ℓ 12 ml of petrol. How much petrol is left?

Solution:

Total volume of petrol filled = 34 ℓ 675 ml

Volume of petrol used = – 23 ℓ 012 ml

Volume of petrol left = 11 ℓ 663 ml

So, 11 ℓ 663 ml of petrol is left.

- 3. A shopkeeper sold 67 ℓ 869 ml of orange juice and 54 ℓ 124 ml of apple juice. How much more orange juice was sold than apple juice?**

Solution:

Volume of orange juice sold = 67 ℓ 869 ml

Volume of apple juice sold = – 54 ℓ 124 ml

More volume of orange juice sold = 13 ℓ 745 ml

So, 13 ℓ 745 ml more orange juice was sold than apple juice.

- 4. A milkman sold 87 ℓ 590 ml of milk in a week. If he sold 34 ℓ 80 ml of milk in three days, how much milk was sold the other four days?**

Solution:

Volume of milk sold in a week = 87 ℓ 590 ml

Volume of milk sold in 3 days of the week = – 34 ℓ 080 ml

Volume of milk sold in 4 days of the week = 53 ℓ 510 ml

So, 53 ℓ 510 ml of milk was sold in four days of the week.

Unit Check 4

- 1. Encircle the correct options.**

a) The most appropriate unit to measure the length of a room.

- (i) m ii) cm iii) km iv) ml

b) The abbreviation used for kilogram.

- i) mg ii) gk iii) g (iv) kg

c) There are _____ millilitres in 1 litre.

- (i) 1000 ii) 500 iii) 50 iv) 100

d) The distance from one city to another city can be measured in _____.

- i) kg (ii) km iii) m iv) cm

e) The capacity of a tin of oil is 250 ml and the capacity of another tin is 500 ml. The total capacity of both tins.

- (i) 750 ml ii) 500 ml iii) 250 ml iv) 650 ml

2. Tick (✓) the correct units to measure these objects.

a) Capacity



l ml ✓

b) Mass



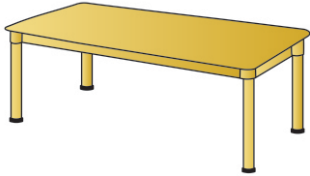
✓ g kg

c) Length



m cm ✓

d) Length



✓ m km

e) Capacity



l ml ✓

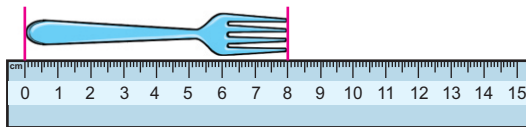
f) Mass



g kg ✓

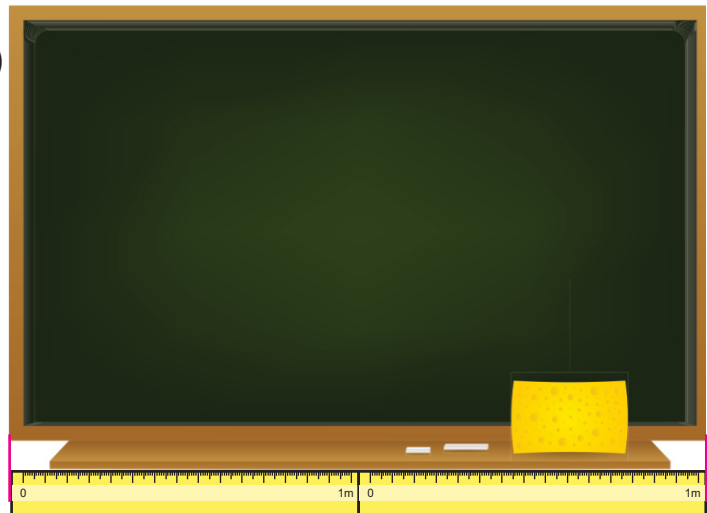
3. Measure and write.

a)

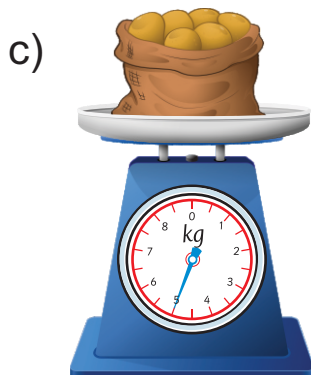


The length of the fork is 8 cm.

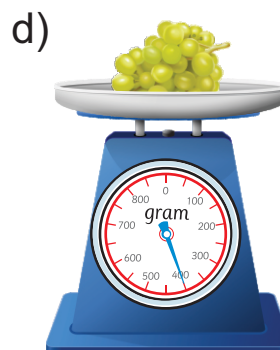
b)



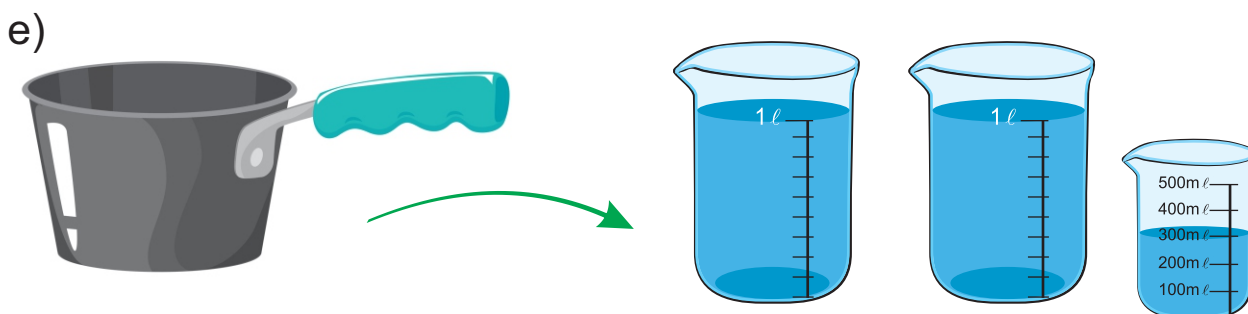
The length of the board is 2 m.



The mass of the bag of potatoes is 5 kg.



The mass of the grapes is 400 g.



The capacity of the pan is 2 ℓ 300 $\text{m}\ell$.

4. Solve the following.

a)

16 km 123 m
+ 13 km 404 m
29 km 527 m

b)

67 m 15 cm
+ 10 m 20 cm
77 m 35 cm

c)

50 kg 731 g
+ 24 kg 214 g
74 kg 945 g

d)

25 kg 603 g
+ 30 kg 301 g
55 kg 904 g

e)

79 ℓ 648 $\text{m}\ell$
– 47 ℓ 547 $\text{m}\ell$
32 ℓ 101 $\text{m}\ell$

f)

59 ℓ 945 $\text{m}\ell$
– 40 ℓ 030 $\text{m}\ell$
19 ℓ 915 $\text{m}\ell$

- 5. A car covered 52 km 212 m on Saturday and 37 km 304 m on Sunday. Find the total distance it covered.**

Solution

Distance covered by car on Saturday = 52 km 212 m

Distance covered by car on Sunday = + 37 km 304 m

Total distance covered = 89 km 516 m

So, the car covered a total distance of 89 km 516 m.

- 6. A piece of wire is 96 m 23 cm long. If it is cut into two pieces and the length of one piece is 56 m 20 cm, then find the length of the other piece.**

Solution

Total length of 2 pieces of wire = 96 m 23 cm

Length of 1 piece of wire = - 56 m 20 cm

Length of the other piece of wire = 40 m 03 cm

So, the length of the other piece of wire is 40 m 03 cm.

- 7. A water tank had 98 ℓ 490 ml of water. A gardener used 18 ℓ 360 ml of water for watering the plants. How much water is left?**

Solution:

Volume of water in a tank = 98 ℓ 490 ml

Volume of water used for watering the plants = - 18 ℓ 360 ml

Volume of water left = 80 ℓ 130 ml

So, 80 ℓ 130 ml of water is left

- 8. A shopkeeper has 59 kg 455 g of tomatoes. 13 kg 340 g of tomatoes are rotten. Find the mass of fresh tomatoes.**

Solution

$$\begin{array}{rcl} \text{Total mass of tomatoes} & = & 59 \text{ kg } 455 \text{ g} \\ \text{Mass of rotten tomatoes} & = & - 13 \text{ kg } 340 \text{ g} \\ \hline \text{Mass of fresh tomatoes} & = & 46 \text{ kg } 115 \text{ g} \end{array}$$

So, there are 46 kg 115 g fresh tomatoes

- 9. A family consumed 16 l 610 ml of water on one day and 22 l 180 ml of water on another day. Find the volume of water consumed in both days.**

Solution:

$$\begin{array}{rcl} \text{Water consumed on one day} & = & 16 \text{ l } 610 \text{ ml} \\ \text{Water consumed on another day} & = & + 22 \text{ l } 180 \text{ ml} \\ \hline \text{Volume of water consumed in both days} & = & 38 \text{ l } 790 \text{ ml} \end{array}$$

So, 38 l 790 ml water was consumed altogether.

Unit 5: Time

Learning Check 5.1

1. Write a.m. or p.m. with the given times.

a) Morning 9:23

b) Evening 5:45

c) Night 11:00

d) Morning 11:25

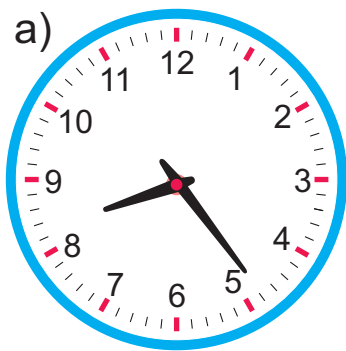
e) Noon 12:00

f) Afternoon 3:00

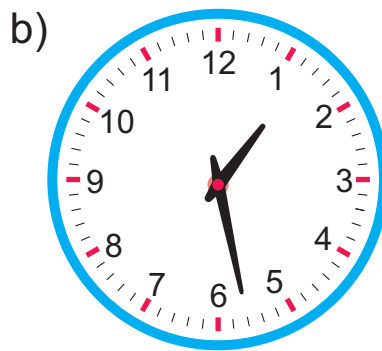
g) Evening 7:33

h) Night 10:20

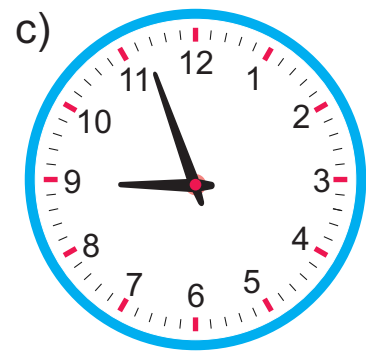
2. Look at the clocks below. Write the correct times.



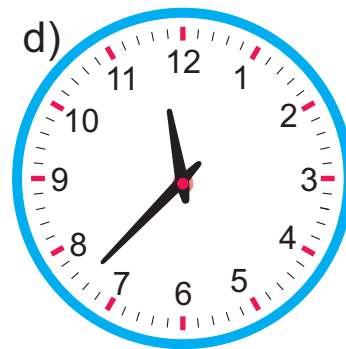
8 : 24



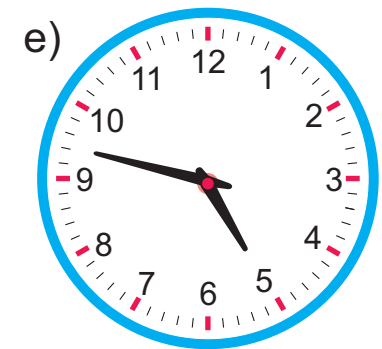
1 : 28



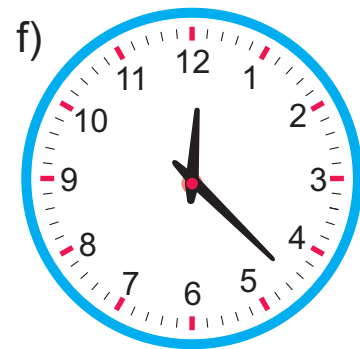
8 : 57



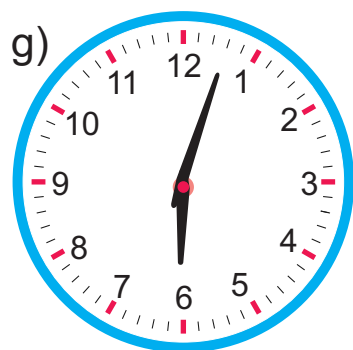
11 : 37



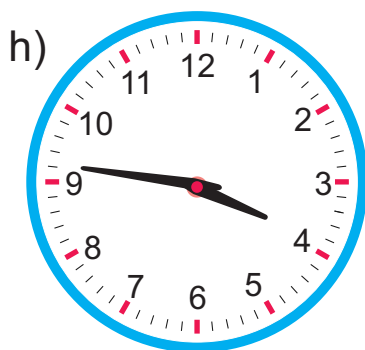
4 : 47



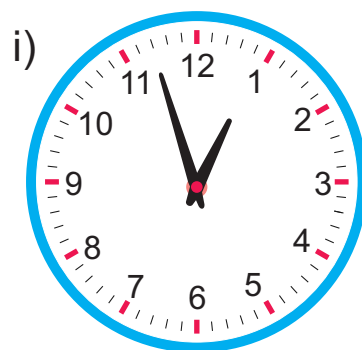
12 : 23



6 : 03

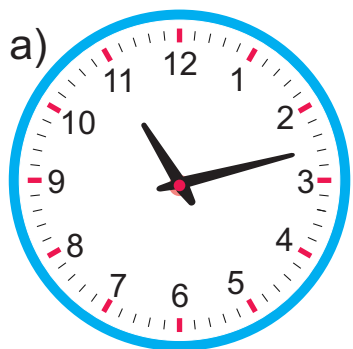


3 : 46

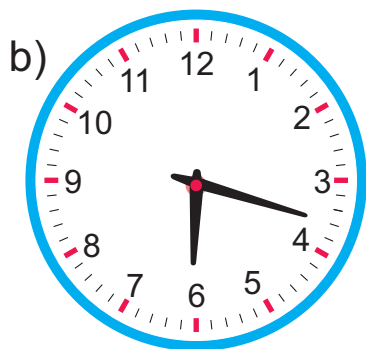


12 : 57

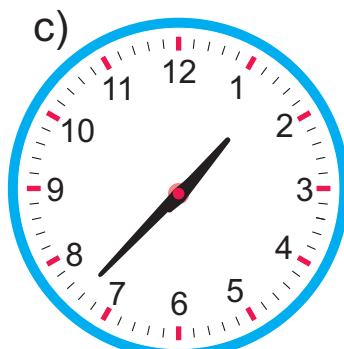
3. Draw the hands on the clocks to show the following times.



11:13

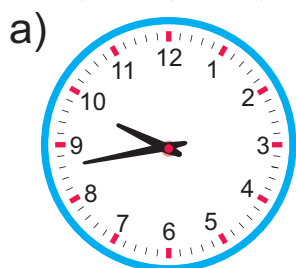


06:18



01:37

4. Circle the digital clocks according to the given times on the analog clocks.

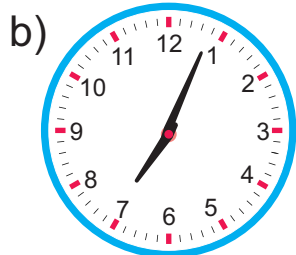


9:00

3:30

9:43

10:43

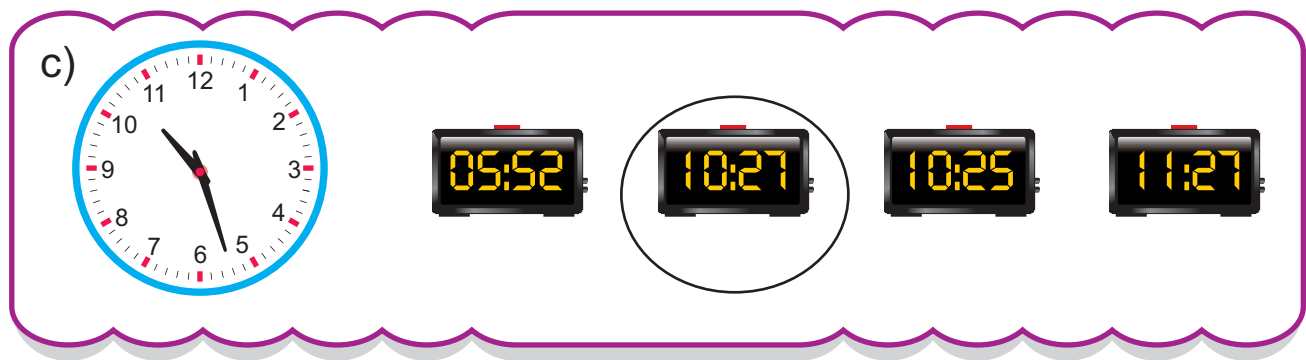


12:30

7:30

12:04

7:04



5. Look at the pictures. Write the correct times using a.m. and p.m. in the given blanks.



Ibrahim is offering Maghrib namaz. The time is 6:43 p.m.



Sehrish is having lunch with her family. The time is 2:16 p.m.



Ibrahim is sleeping at night. The time is 10:07 p.m.

Learning Check 5.2

1. Solve the following.

a)

$$\begin{array}{r} 6 \text{ hours} \\ + 2 \text{ hours} \\ \hline 8 \text{ hours} \\ \hline \end{array}$$

b)

$$\begin{array}{r} 7 \text{ hours} \\ + 3 \text{ hours} \\ \hline 10 \text{ hours} \\ \hline \end{array}$$

c)

$$\begin{array}{r} 12 \text{ hours} \\ + 15 \text{ hours} \\ \hline 27 \text{ hours} \\ \hline \end{array}$$

d)

$$\begin{array}{r} 24 \text{ hours} \\ + 10 \text{ hours} \\ \hline 34 \text{ hours} \\ \hline \end{array}$$

e)

$$\begin{array}{r} 18 \text{ hours} \\ + 2 \text{ hour} \\ \hline 20 \text{ hours} \\ \hline \end{array}$$

f)

$$\begin{array}{r} 17 \text{ hours} \\ + 7 \text{ hours} \\ \hline 24 \text{ hours} \\ \hline \end{array}$$

g)

$$\begin{array}{r} 7 \text{ hours} \\ - 4 \text{ hours} \\ \hline 3 \text{ hours} \\ \hline \end{array}$$

h)

$$\begin{array}{r} 8 \text{ hours} \\ - 3 \text{ hours} \\ \hline 5 \text{ hours} \\ \hline \end{array}$$

i)

$$\begin{array}{r} 6 \text{ hours} \\ - 1 \text{ hours} \\ \hline 5 \text{ hours} \\ \hline \end{array}$$

j)

$$\begin{array}{r} 45 \text{ hours} \\ - 14 \text{ hours} \\ \hline 31 \text{ hours} \\ \hline \end{array}$$

k)

$$\begin{array}{r} 55 \text{ hours} \\ - 22 \text{ hours} \\ \hline 33 \text{ hours} \\ \hline \end{array}$$

l)

$$\begin{array}{r} 12 \text{ hours} \\ - 10 \text{ hours} \\ \hline 2 \text{ hours} \\ \hline \end{array}$$

- 2. Maria recited the Holy Quran for 3 hours on Sunday and 2 hours on Monday. Find the total time she spent reciting the Holy Quran.**

Solution

Time duration of recitation on Sunday = 3 hours

Time duration of recitation on Monday = + 2 hours

Total time Maria spent on recitation = 5 hours

So, Maria spent 5 hours on reciting the Holy Quran altogether.

- 3. A carpenter made a door in 18 hours and a cabinet in 25 hours. How much time does he take to make the door and the cabinet altogether?**

Solution

Time taken to made a door = 18 hours

Time taken to made a cabinet = + 25 hours

Total time taken = 43 hours

So, the carpenter took total 43 hours to make the door and the cabinet.

- 4. Sadia spent 8 hours in the office and Madeeha spent 12 hours in the office. How much more time did Madeeha spend in the office than Sadia?**

Solution

Time spend in office by Madeeha = 12 hours

Time spend in office by Sadia = – 8 hours

More time spent by Madeeha than Sadia = 4 hours

So, Madeeha spent 4 hours more in office than Sadia.

- 5. Ahmed travelled for 60 hours and Raza travelled for 48 hours in a month. How much more time did Ahmed travel than Raza?**

Solution

$$\text{Travelling time by Ahmad} = 60 \text{ hours}$$

$$\text{Travelling time by Raza} = \underline{- 48 \text{ hours}}$$

$$\text{More travelling time by Ahmad than Raza} = 12 \text{ hours}$$

So, Ahmad travelled 12 hours more than Raza.

- 6. Grade 3 students went on a fun trip. They spent 3 hours at a zoo and 2 hours at a museum. How much time did they spend altogether? Also, where did they spend more time and by how much more?**

Solution

$$\text{Time spent at zoo} = 3 \text{ hours}$$

$$\text{Time spent at museum} = \underline{+ 2 \text{ hours}}$$

$$\text{Total time spent altogether} = 5 \text{ hours}$$

So, they spent 5 hours altogether.

$$\text{Time spent at zoo} = 3 \text{ hours}$$

$$\text{Time spent at museum} = \underline{- 2 \text{ hours}}$$

$$\text{More time spent at zoo than museum} = 1 \text{ hour}$$

So, they spent 1 hour more at zoo than the museum.

Learning Check 5.3

1. Look at the calendar on the previous page and answer the questions.



- What day of the week is January 23rd? Saturday
- What is the date on the 3rd Monday of May? 17th
- A training workshop started on the 19th of May.
What day is it? Wednesday
- What day is it on the 2nd of June? Wednesday
- What date is it on the 4th Friday of July? 23rd
- What day is it on March 6? Saturday

Unit Check 5

1. Encircle the correct options.

- When the minute hand moves from one small mark to another, _____ has passed.
i) 1 hour **ii) 1 minute** iii) 1 second iv) 12 hours
- We write a.m. with the time between _____.
i) 12 noon to 12 midnight **ii) 12 midnight to 12 noon**
iii) 1 midnight to 2 noon iv) 11 midnight to 11 noon

c) The sum of 12 hours and 5 hours:

- i) 17 min ii) 7 hours **iii) 17 hours** iv) 7 min

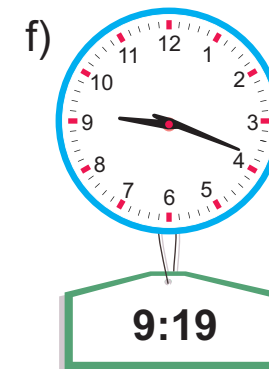
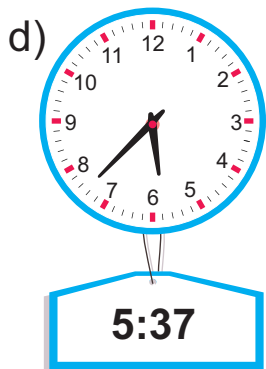
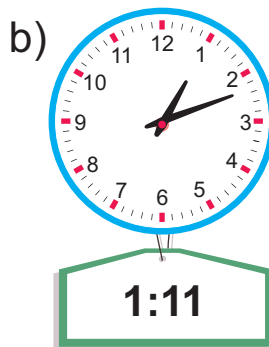
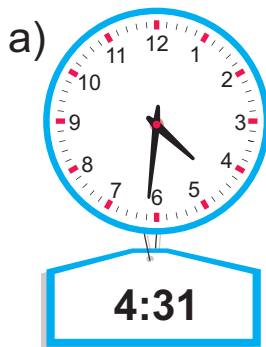
d) The abbreviation p.m. stands for:

- i) post master ii) post marine
iii) post meridiem iv) past meridiem

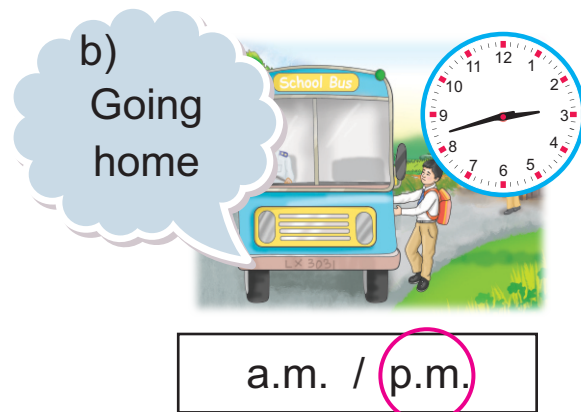
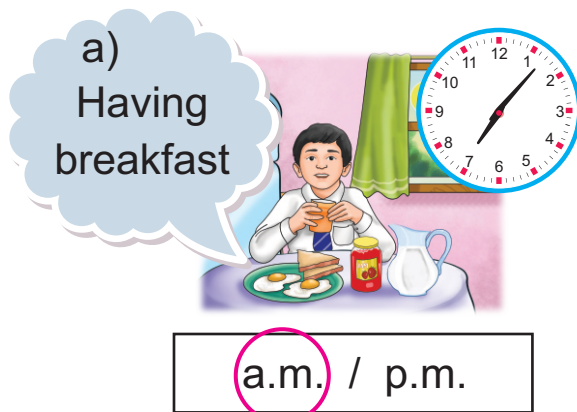
e) The minute hand shows _____ minutes between each of the 12 marks on a clock.

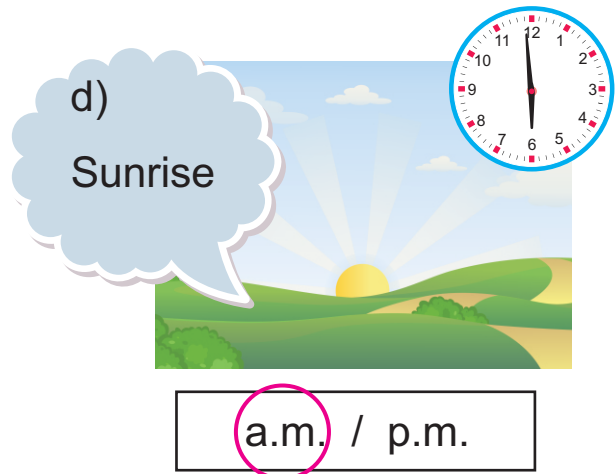
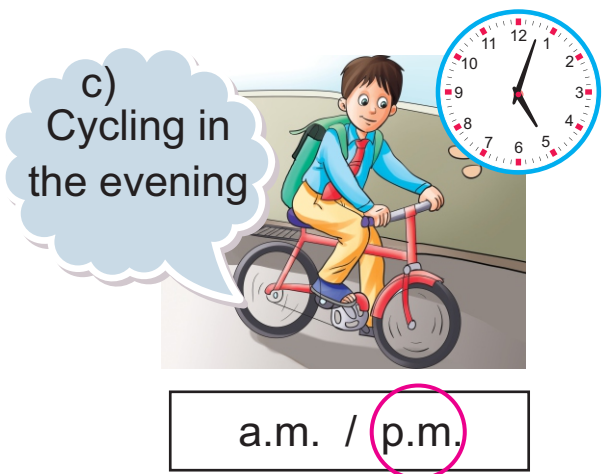
- i) 10 ii) 60 **iii) 5** iv) 1

2. Look at the clocks below. Write the correct times.

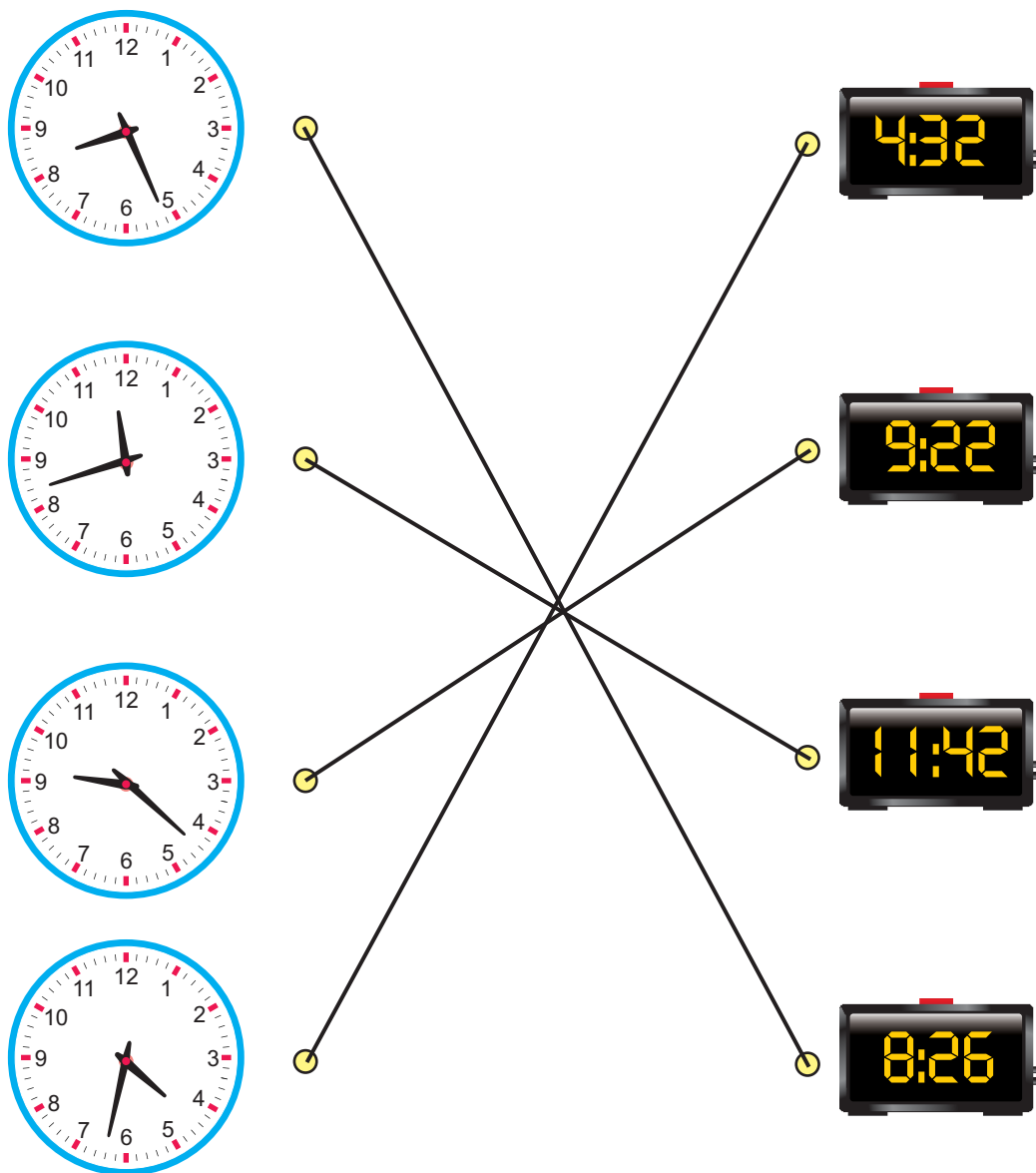


3. Encircle a.m. or p.m. for each activity.





4. Match the digital clocks to the analog clocks showing the same time.



5. Solve the following.

$$\begin{array}{r} \text{a) } 19 \text{ hours} \\ + 09 \text{ hours} \\ \hline 28 \text{ hours} \end{array}$$

$$\begin{array}{r} \text{b) } 12 \text{ hours} \\ + 02 \text{ hours} \\ \hline 14 \text{ hours} \end{array}$$

$$\begin{array}{r} \text{c) } 15 \text{ hours} \\ + 10 \text{ hours} \\ \hline 25 \text{ hours} \end{array}$$

$$\begin{array}{r} \text{d) } 18 \text{ hours} \\ - 12 \text{ hours} \\ \hline 6 \text{ hours} \end{array}$$

$$\begin{array}{r} \text{e) } 14 \text{ hours} \\ - 02 \text{ hours} \\ \hline 12 \text{ hours} \end{array}$$

$$\begin{array}{r} \text{f) } 8 \text{ hours} \\ - 5 \text{ hours} \\ \hline 3 \text{ hours} \end{array}$$

6. Maha travelled for 10 hours while going from one town to another by bus. The next day, she came back in a car and reached her town in 8 hours. How many hours did she travel in total?

Solution

$$\begin{array}{rcl} \text{Time spent on travelling by bus} & = & 10 \text{ hours} \\ \text{Time spent on travelling by car} & = & + 8 \text{ hours} \\ \hline \text{Total time spent} & = & 18 \text{ hours} \end{array}$$

So, Maha spent 18 hours in travelling.

7. Akif completed a painting in 2 hours. His friend Saad completed his painting in 4 hours. How much more time did Saad take than Akif?

Solution

$$\begin{array}{rcl} \text{Time taken by Saad to complete the painting} & = & 4 \text{ hours} \\ \text{Time taken by Akif to complete the painting} & = & - 2 \text{ hours} \\ \hline \text{More time taken by Saad} & = & 2 \text{ hours} \end{array}$$

So, Saad took 2 hours more to complete the painting.

8. Look at the calendar given in the chapter and answer the questions.

a) What is the last day of June?

Answer: Wednesday

b) What is the date on the 3rd Friday of September?

Answer: 17th

c) What date comes on the 4th Sunday of November?

Answer: 28th

d) What day is it on the 25th of April?

Answer: Sunday

Unit 6: Geometry

Learning Check 6.1

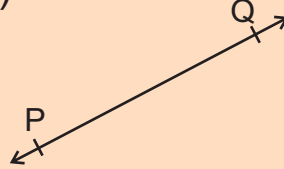
3. Identify and tick (✓) the correct options.

a)



- ☐ Line segment
- ☒ Ray
- ☐ Point

b)



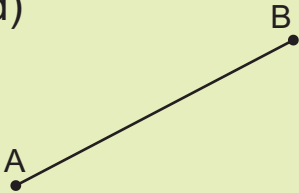
- ☐ Line segment
- ☐ Ray
- ☒ Line

c)



- ☐ Line segment
- ☐ Ray
- ☒ Point

d)



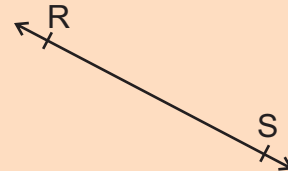
- ☒ Line segment
- ☐ Ray
- ☐ Point

e)



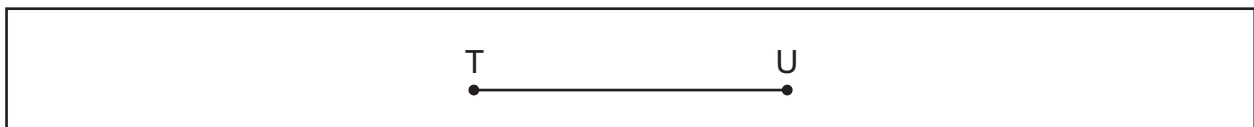
- ☐ Line segment
- ☒ Ray
- ☐ Point

f)

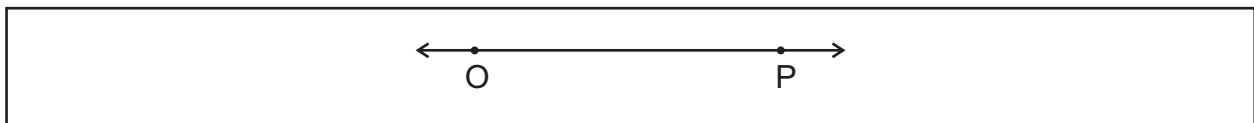


- ☐ Line segment
- ☐ Ray
- ☒ Line

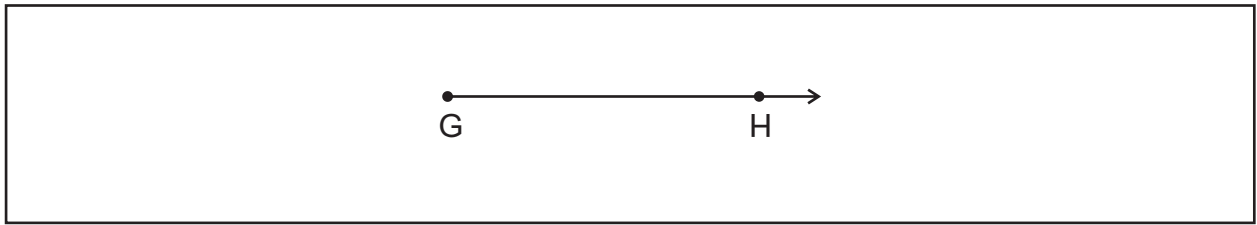
4. Draw a line segment $\overline{TU}$.



5. Draw a line $\overleftrightarrow{OP}$.



6. Draw a ray $\overrightarrow{GH}$.

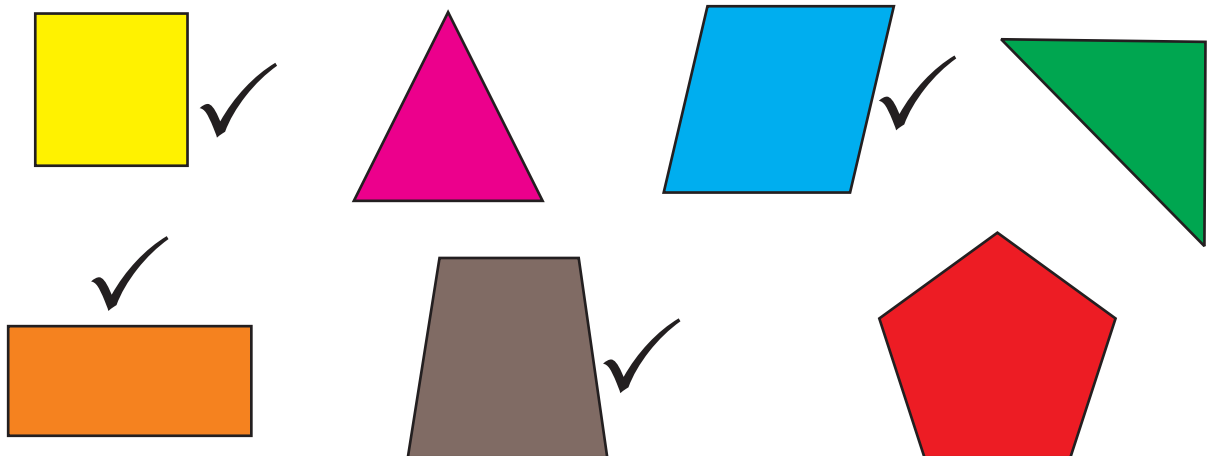


7. Mark a point N.

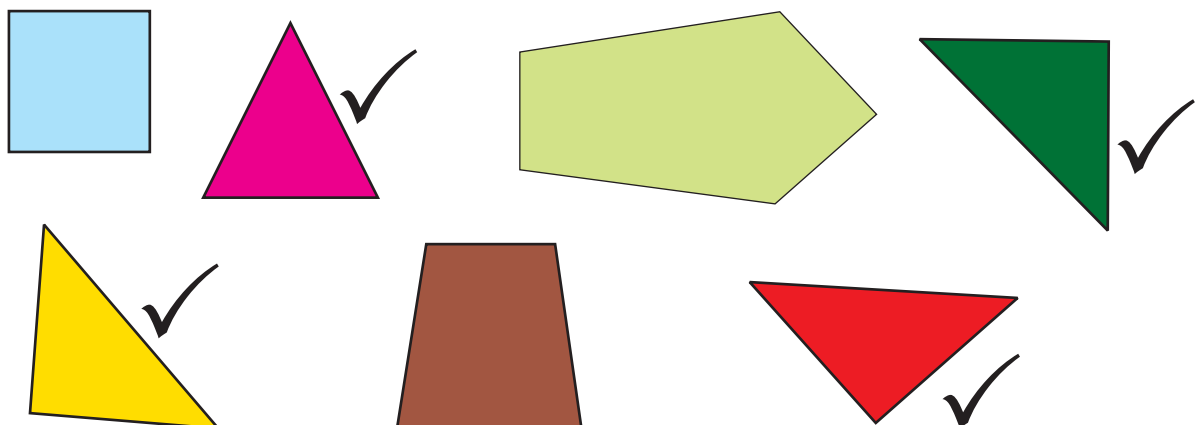


Learning Check 6.2

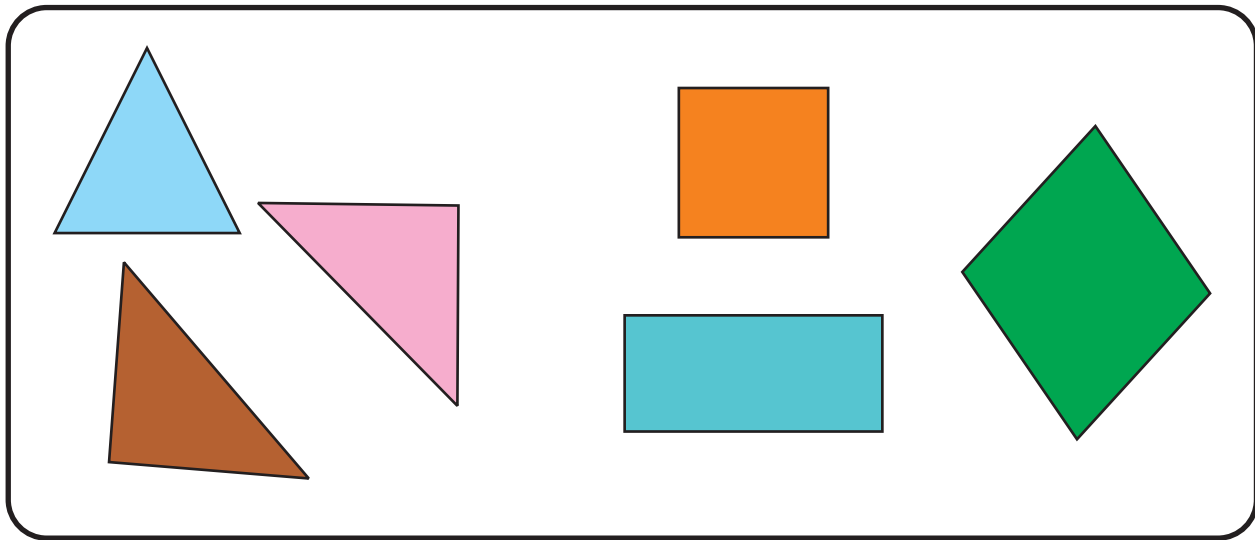
1. Identify and tick (✓) the quadrilaterals.



2. Identify and tick (✓) the triangles.



3. Draw 3 triangles and 3 quadrilaterals. Colour them.

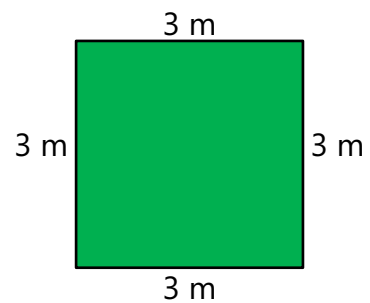


4. Find the perimeters of the following squares.

a) To find the perimeter of this square, add the length of all of its sides.

$$\begin{aligned}\text{Perimeter} &= 3 \text{ m} + 3 \text{ m} + 3 \text{ m} + 3 \text{ m} \\ &= 12 \text{ m}\end{aligned}$$

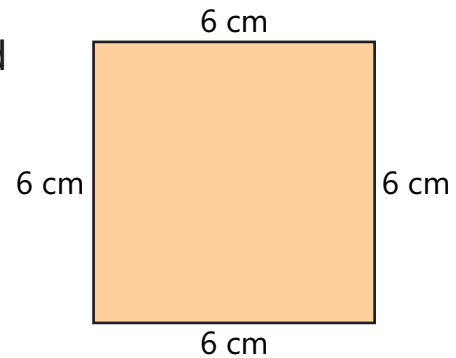
So, the perimeter of the square is 12 m.



b) To find the perimeter of this square, add the length of all of its sides.

$$\begin{aligned}\text{Perimeter} &= 6 \text{ cm} + 6 \text{ cm} + 6 \text{ cm} + 6 \text{ cm} \\ &= 24 \text{ cm}\end{aligned}$$

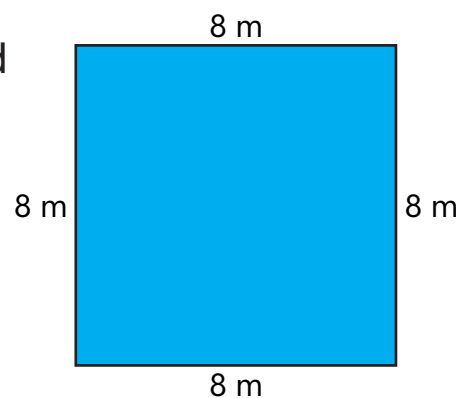
So, the perimeter of the square is 24 cm.



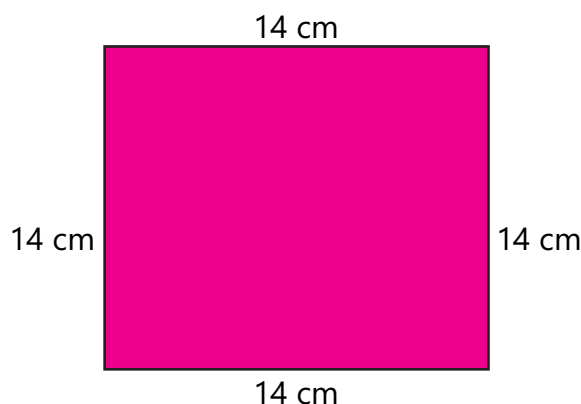
c) To find the perimeter of this square, add the length of all of its sides.

$$\begin{aligned}\text{Perimeter} &= 8 \text{ m} + 8 \text{ m} + 8 \text{ m} + 8 \text{ m} \\ &= 32 \text{ m}\end{aligned}$$

So, the perimeter of the square is 32 cm.



- d) To find the perimeter of this square, add the length of all of its sides.



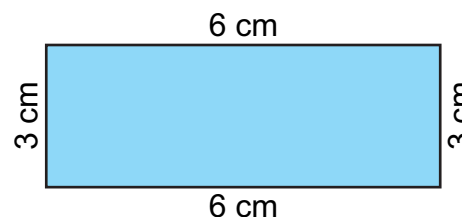
$$\begin{aligned}\text{Perimeter} &= 14 \text{ cm} + 14 \text{ cm} + 14 \text{ cm} + 14 \text{ cm} \\ &= 56 \text{ cm}\end{aligned}$$

So, the perimeter of the square is 56 cm.

5. Find the perimeters of the following rectangles.

- a) To find the perimeter of the rectangle, add the lengths of all its sides.

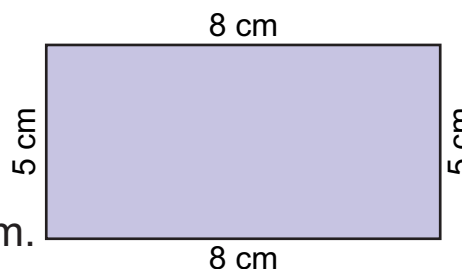
$$\begin{aligned}\text{Perimeter} &= 6 \text{ cm} + 3 \text{ cm} + 6 \text{ cm} + 3 \text{ cm} \\ &= 18 \text{ cm}\end{aligned}$$



So, the perimeter of the rectangle is 18 cm.

- b) To find the perimeter of the rectangle, add the lengths of all its sides.

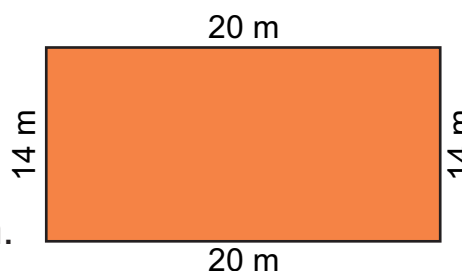
$$\begin{aligned}\text{Perimeter} &= 8 \text{ cm} + 5 \text{ cm} + 8 \text{ cm} + 5 \text{ cm} \\ &= 26 \text{ cm}\end{aligned}$$



So, the perimeter of the rectangle is 26 cm.

- c) To find the perimeter of the rectangle, add the lengths of all its sides.

$$\begin{aligned}\text{Perimeter} &= 20 \text{ m} + 14 \text{ m} + 20 \text{ m} + 14 \text{ m} \\ &= 68 \text{ m}\end{aligned}$$



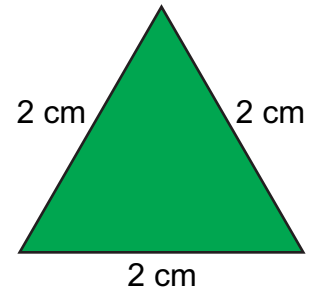
So, the perimeter of the rectangle is 68 m.

6. Find the perimeters of the following triangles.

- a) To find the perimeter of a triangle, add the lengths of all of its sides.

$$\begin{aligned}\text{Perimeter} &= 2 \text{ cm} + 2 \text{ cm} + 2 \text{ cm} \\ &= 6 \text{ cm}\end{aligned}$$

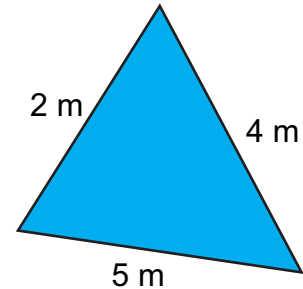
So, the perimeter of the triangle is 6 cm.



- b) To find the perimeter of a triangle, add the lengths of all of its sides.

$$\begin{aligned}\text{Perimeter} &= 4 \text{ m} + 5 \text{ m} + 2 \text{ m} \\ &= 11 \text{ m}\end{aligned}$$

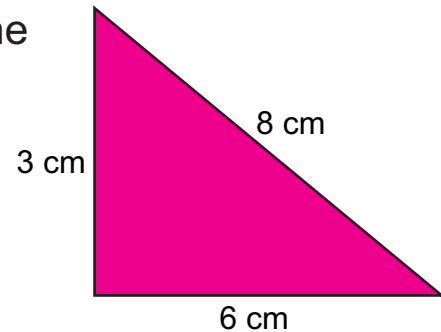
So, the perimeter of the triangle is 11 m.



- c) To find the perimeter of a triangle, add the lengths of all of its sides.

$$\begin{aligned}\text{Perimeter} &= 3 \text{ cm} + 6 \text{ cm} + 8 \text{ cm} \\ &= 17 \text{ cm}\end{aligned}$$

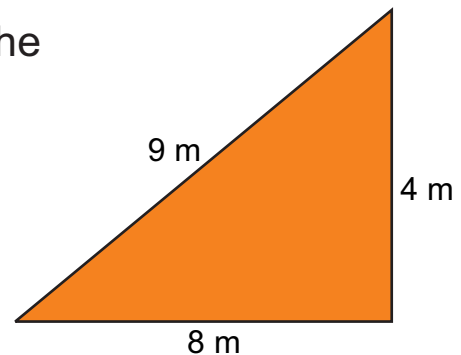
So, the perimeter of the triangle is 17 cm.



- d) To find the perimeter of a triangle, add the lengths of all of its sides.

$$\begin{aligned}\text{Perimeter} &= 4 \text{ m} + 8 \text{ m} + 9 \text{ m} \\ &= 21 \text{ m}\end{aligned}$$

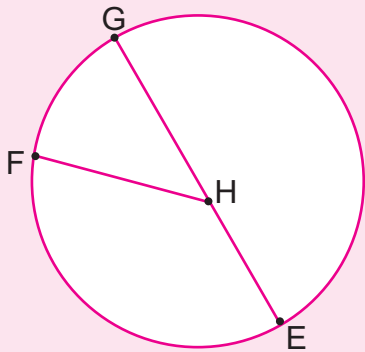
So, the perimeter of the triangle is 21 m.



Learning Check 6.3

1. Identify and name the radius, diameter and centre of these circles.

a)

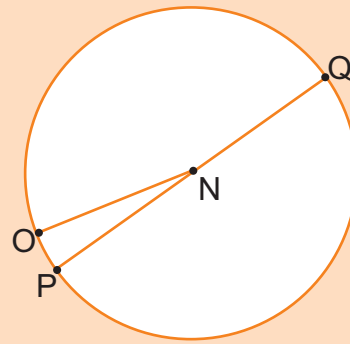


Centre: H

Radius (or radii): HF, HE, HG

Diameter: GE

b)

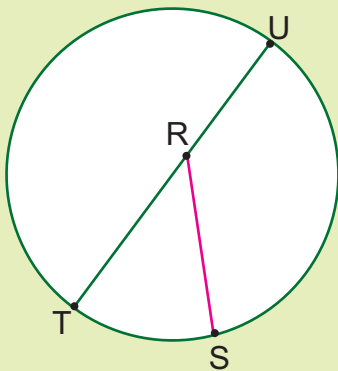


Centre: N

Radius (or radii): NQ, NP, NO

Diameter: PQ

c)

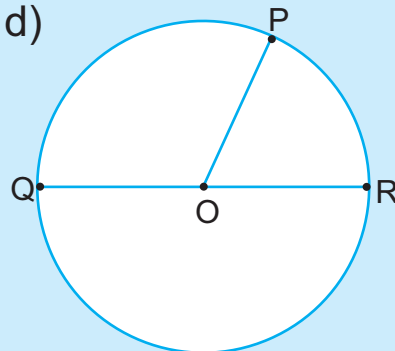


Centre: R

Radius (or radii): RS, RT, RU

Diameter: TU

d)



Centre: O

Radius (or radii): OP, OR, OQ

Diameter: QR

2. Write the names of the parts of the circle.

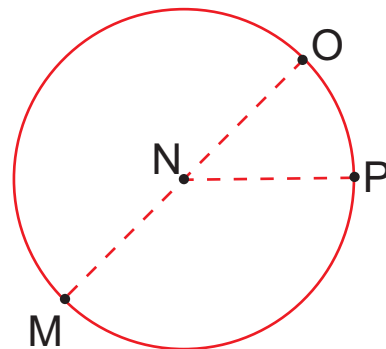
N = _____ Center

$\overline{MN}$ = _____ Radius

$\overline{NO}$ = _____ Radius

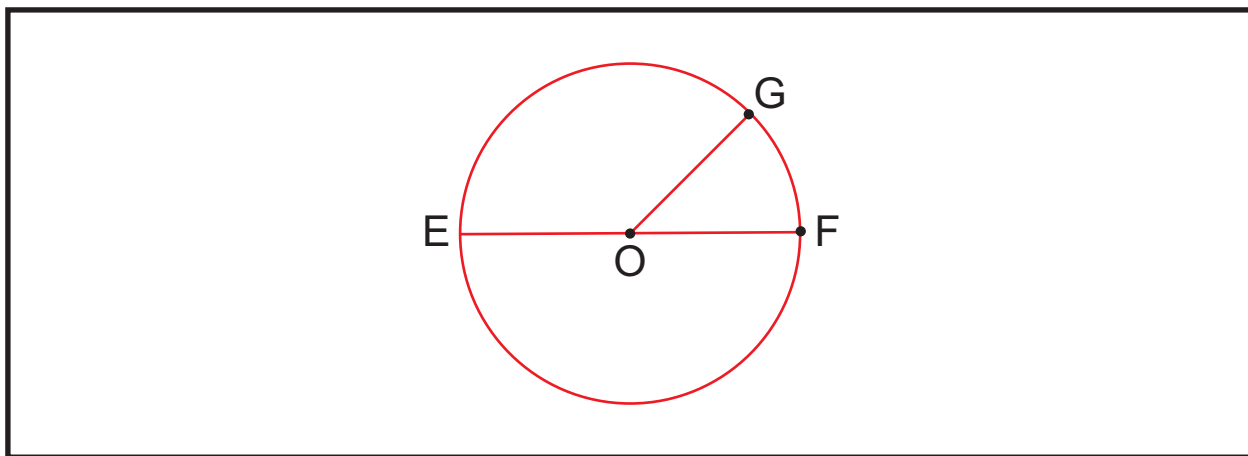
$\overline{NP}$ = _____ Radius

$\overline{MO}$ = _____ Diameter



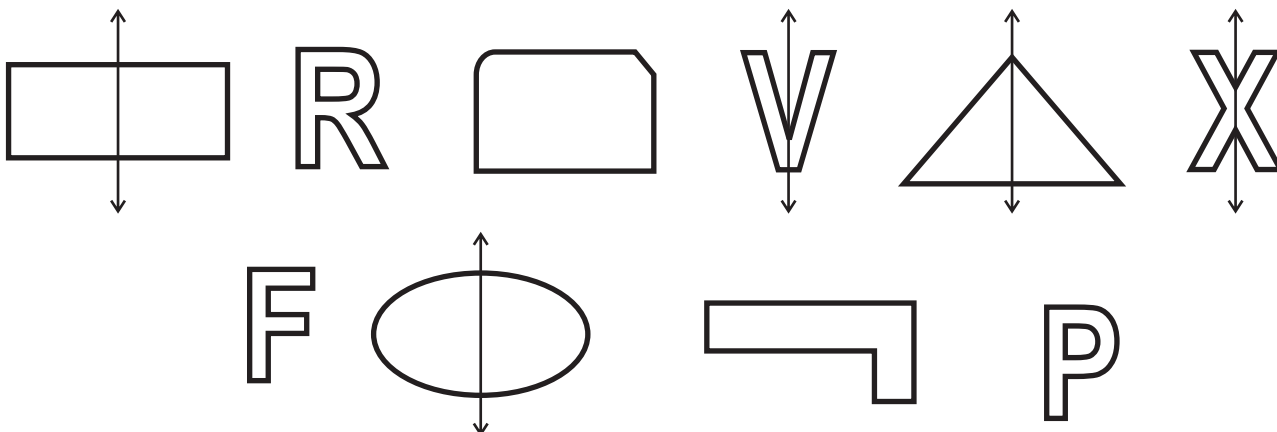
3. Draw a circle and label its given parts.

Radii: $\overline{OF}$, $\overline{OE}$ and $\overline{OG}$, **Diameter:** $\overline{EF}$, centre: O

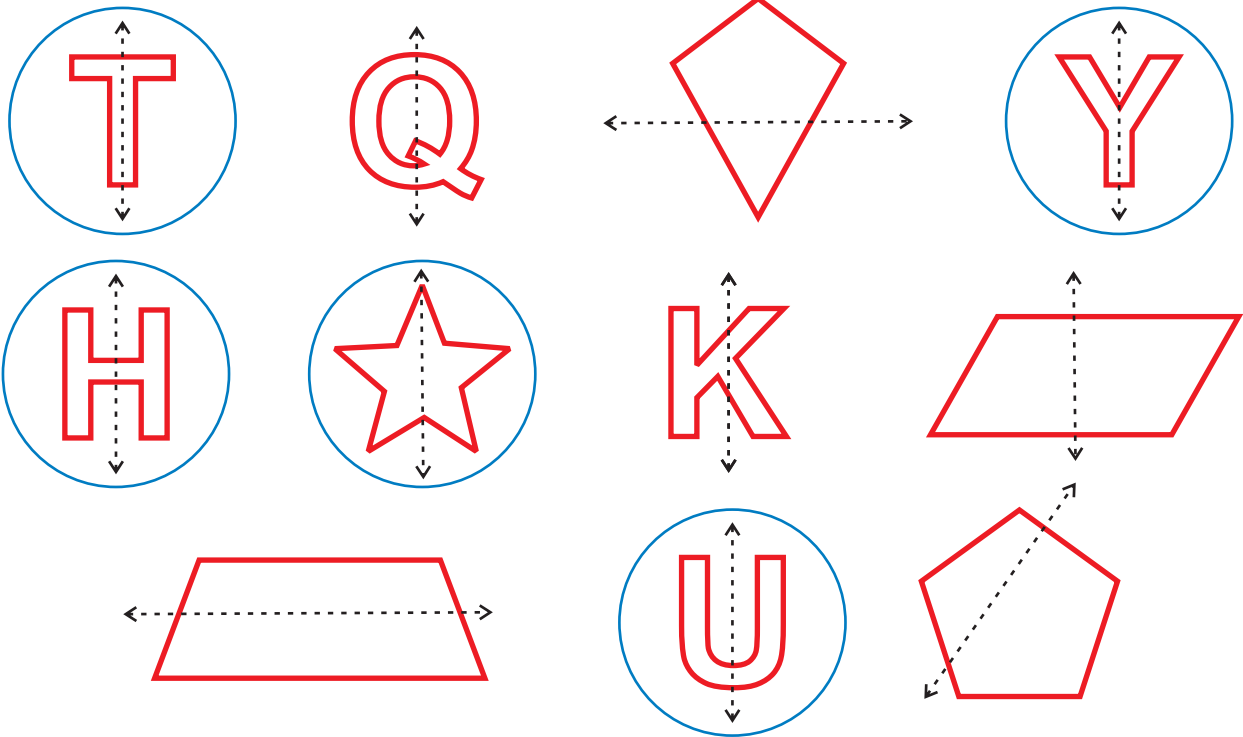


Learning Check 6.4

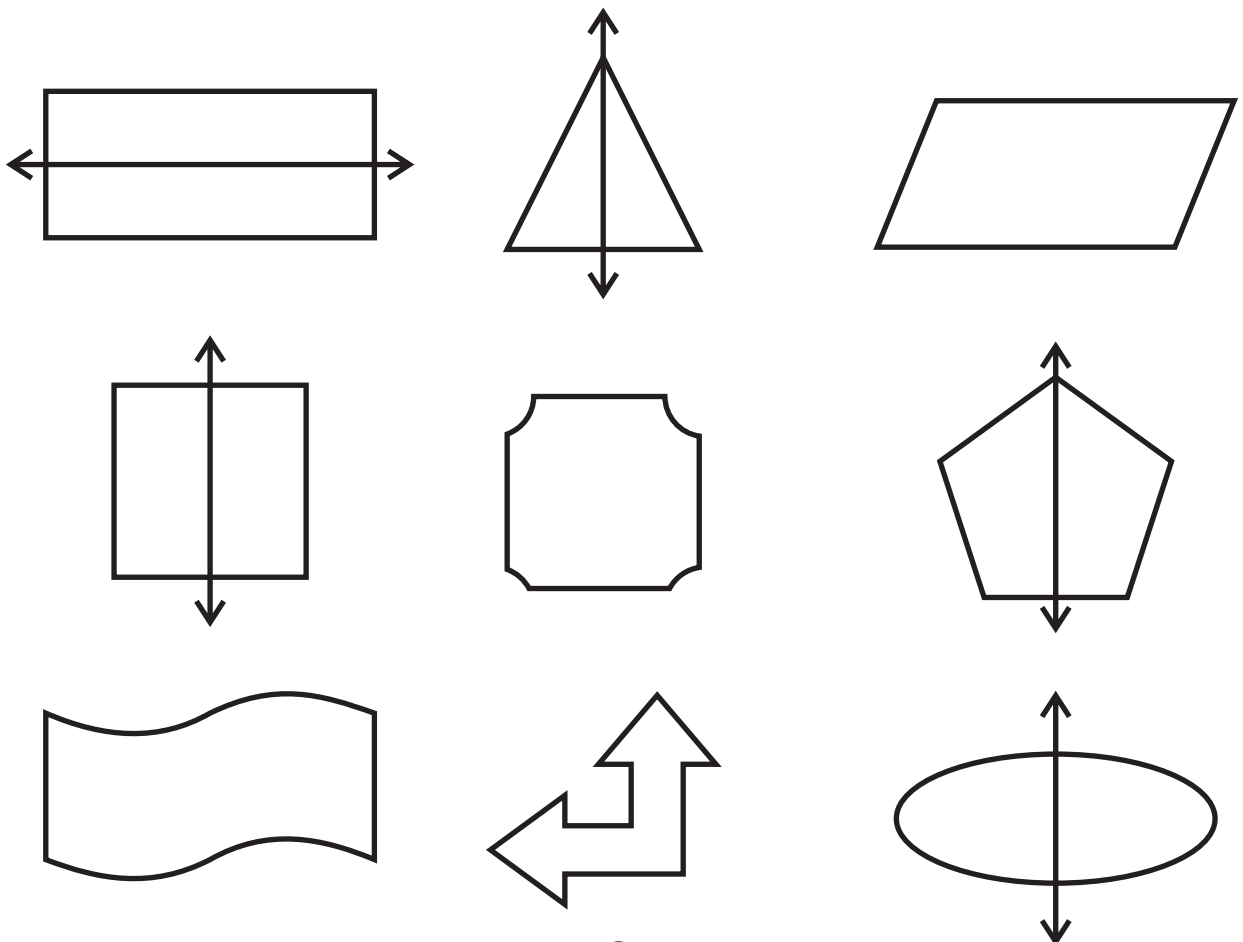
1. Identify and colour the symmetric figures. Draw the lines of symmetry (if possible).

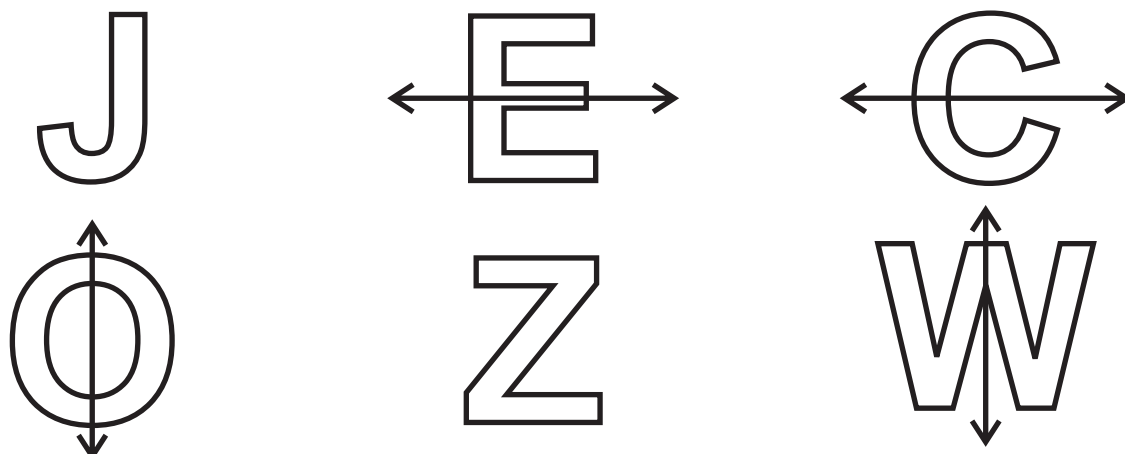


2. Identify and encircle the shape if the line dividing it is the line of symmetry.



3. Draw the lines of symmetry (if any) for these shapes.



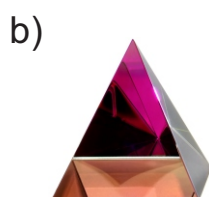


Learning Check 6.5

1. Look at the objects and write the names of their shapes.



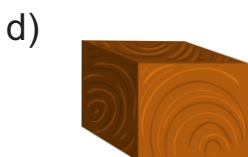
Cuboid



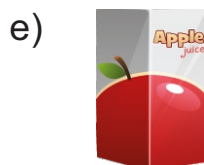
Pyramid



Cuboid



Cube



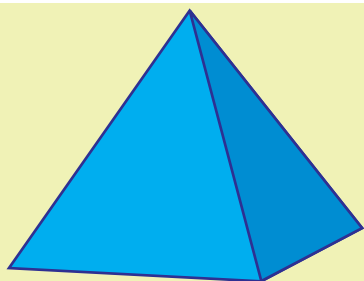
Cuboid



Cube

2. Name these 3-D shapes. Then write and label how many faces, vertices and edges they have.

a)



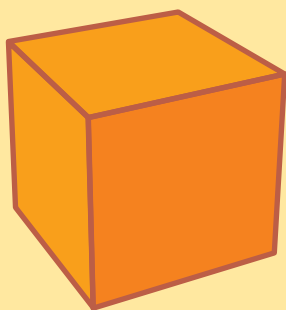
Faces 5

Edges 8

Vertices 5

Name: Pyramid

b)



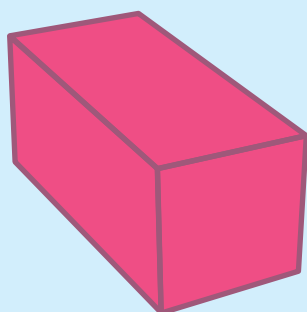
Faces 6

Edges 12

Vertices 8

Name: Cube

c)



Faces 6

Edges 12

Vertices 8

Name: Cuboid

Unit Check 6

1. Encircle the correct options.

a) A _____ is a combination of points along a straight path that extends in two directions.

- i) point ii) ray iii) line iv) line segment

b) A _____ is a line having a beginning point but no end point.

- i) point ii) ray iii) line iv) line segment

c) The radius of any circle is half of its _____.

- i) centre ii) perimeter iii) diameter iv) edge

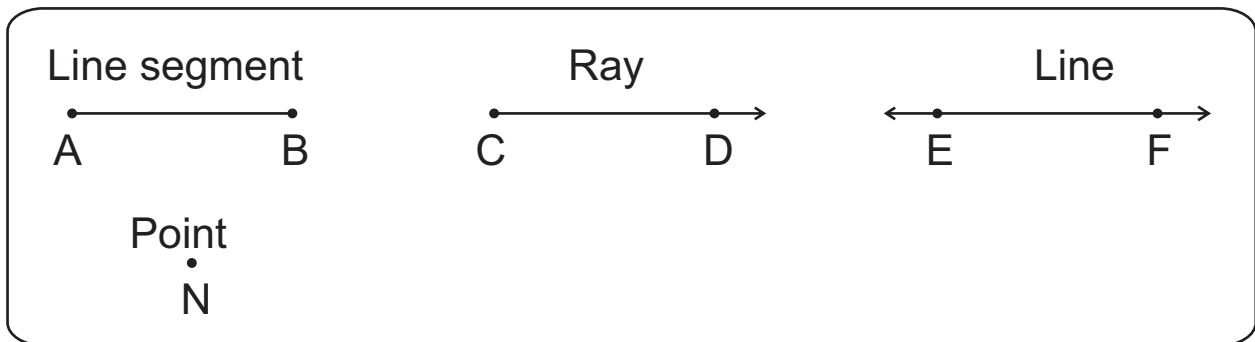
d) A cube has 6 square faces and _____ edges.

- i) 8 ii) 10 iii) 12 iv) 11

e) The sum of the lengths of all sides of a closed shape is called its _____.

i) radius ii) diameter iii) centre (iv) perimeter

4. Draw and name a line segment, ray, line and point in the given space.



5. Identify and write the correct name (point, line, ray, line segment, etc.) of the following.

a)

Line

b)

Ray

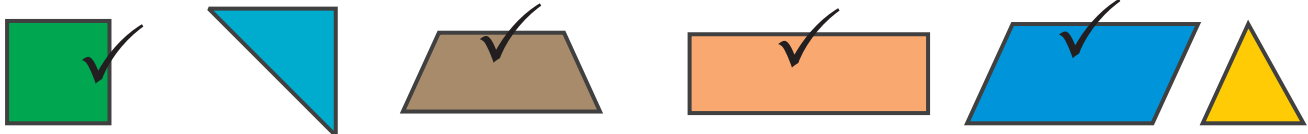
c)

Line segment

d)

Point

6. Identify and tick (✓) the quadrilaterals.



7. Identify and tick (✓) the triangles.

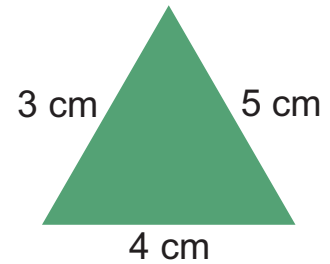


8. Find the perimeters of the following shapes.

- a) To find the perimeter of triangle, add the length of all of its sides.

$$\text{Perimeter} = 3 \text{ cm} + 4 \text{ cm} + 5 \text{ cm} = 12 \text{ cm}$$

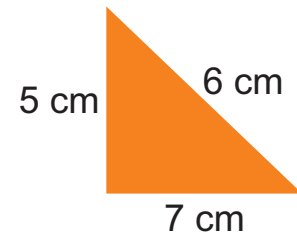
So, the perimeter of the triangle is 12 cm



- b) To find the perimeter of this triangle, add the length of all of its sides.

$$\text{Perimeter} = 5 \text{ cm} + 6 \text{ cm} + 7 \text{ cm} = 18 \text{ cm}$$

So, the perimeter of the triangle is 18 cm.



- c) To find the perimeter of rectangle, add the length of all of its sides.

$$\text{Perimeter} = 4 \text{ m} + 2 \text{ m} + 4 \text{ m} + 2 \text{ m} = 12 \text{ m}$$

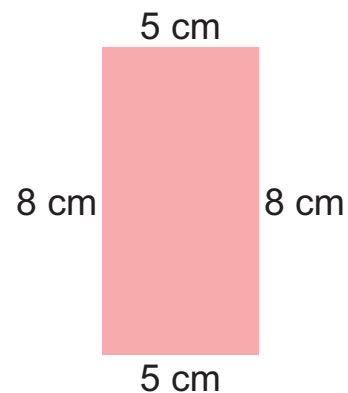
So, the perimeter of the rectangle is 12 m.



- d) To find the perimeter of this rectangle, add the length of all of its sides.

$$\begin{aligned} \text{Perimeter} &= 8 \text{ cm} + 5 \text{ cm} + 8 \text{ cm} + 5 \text{ cm} \\ &= 26 \text{ cm} \end{aligned}$$

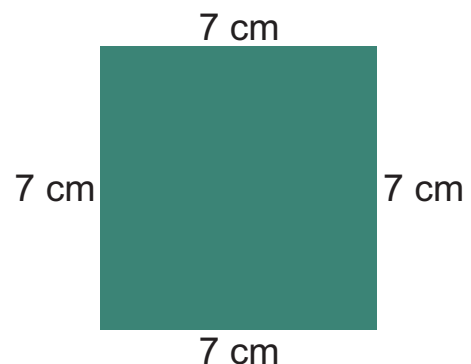
So, the perimeter of the rectangle is 26 cm.



- e) To find the perimeter of a square, add the length of all of its sides.

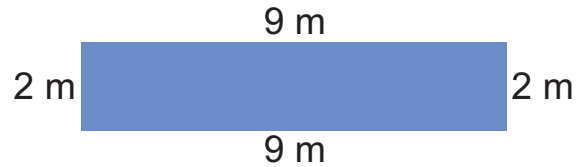
$$\begin{aligned} \text{Perimeter} &= 7 \text{ cm} + 7 \text{ cm} + 7 \text{ cm} + 7 \text{ cm} \\ &= 28 \text{ m} \end{aligned}$$

So, the perimeter of the square is 28 m



f) To find the perimeter of this rectangle,
add the length of all of its sides.

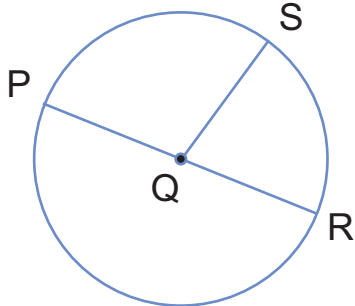
$$\begin{aligned}\text{Perimeter} &= 9 \text{ m} + 2 \text{ m} + 9 \text{ m} + 2 \text{ m} \\ &= 22 \text{ m}\end{aligned}$$



So, the perimeter of the rectangle is 22 m.

9. Identify and name the radius, diameter and centre of these circles.

a)

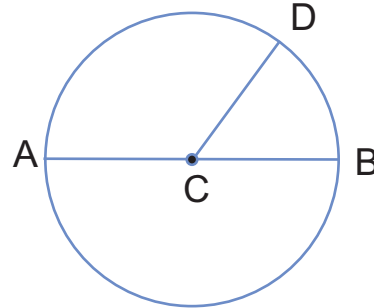


Centre: Q

Radius (or radii): $\overline{QS}$, $\overline{QR}$, $\overline{QP}$

Diameter: $\overline{PR}$

b)

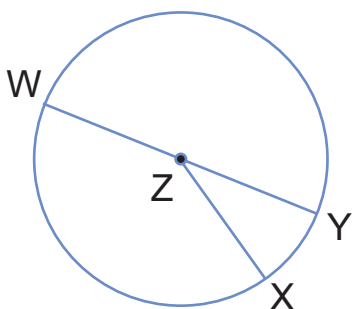


Centre: C

Radius (or radii): $\overline{CD}$, $\overline{CA}$, $\overline{CB}$

Diameter: $\overline{AB}$

c)

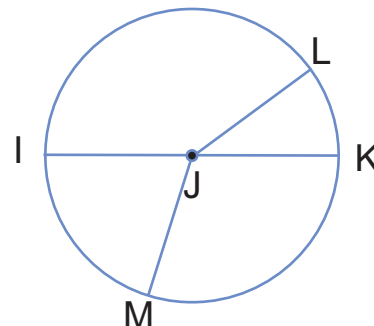


Centre: Z

Radius (or radii): $\overline{ZX}$, $\overline{ZY}$, $\overline{ZW}$

Diameter: $\overline{WY}$

d)

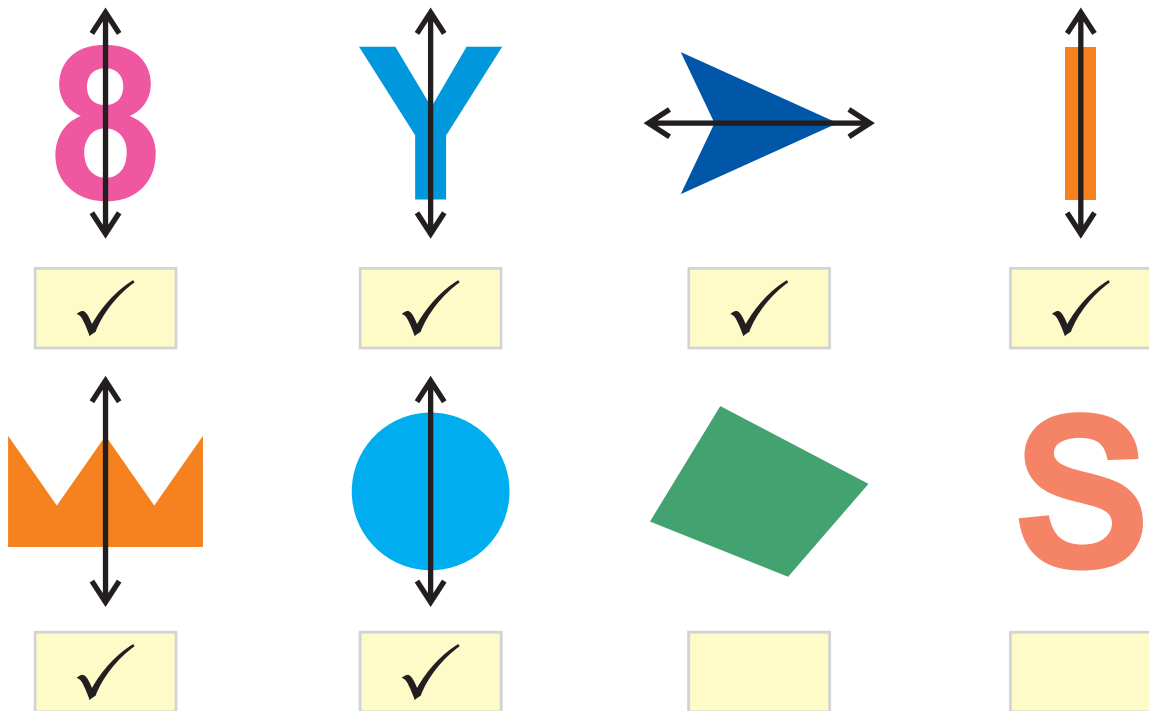


Centre: J

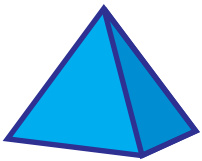
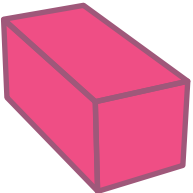
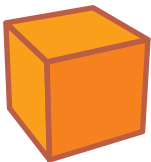
Radius (or radii): $\overline{JM}$, $\overline{JL}$, $\overline{JK}$, $\overline{JI}$

Diameter: $\overline{IK}$

10. Identify and tick (✓) the symmetric figures. Draw their lines of symmetry (if any).



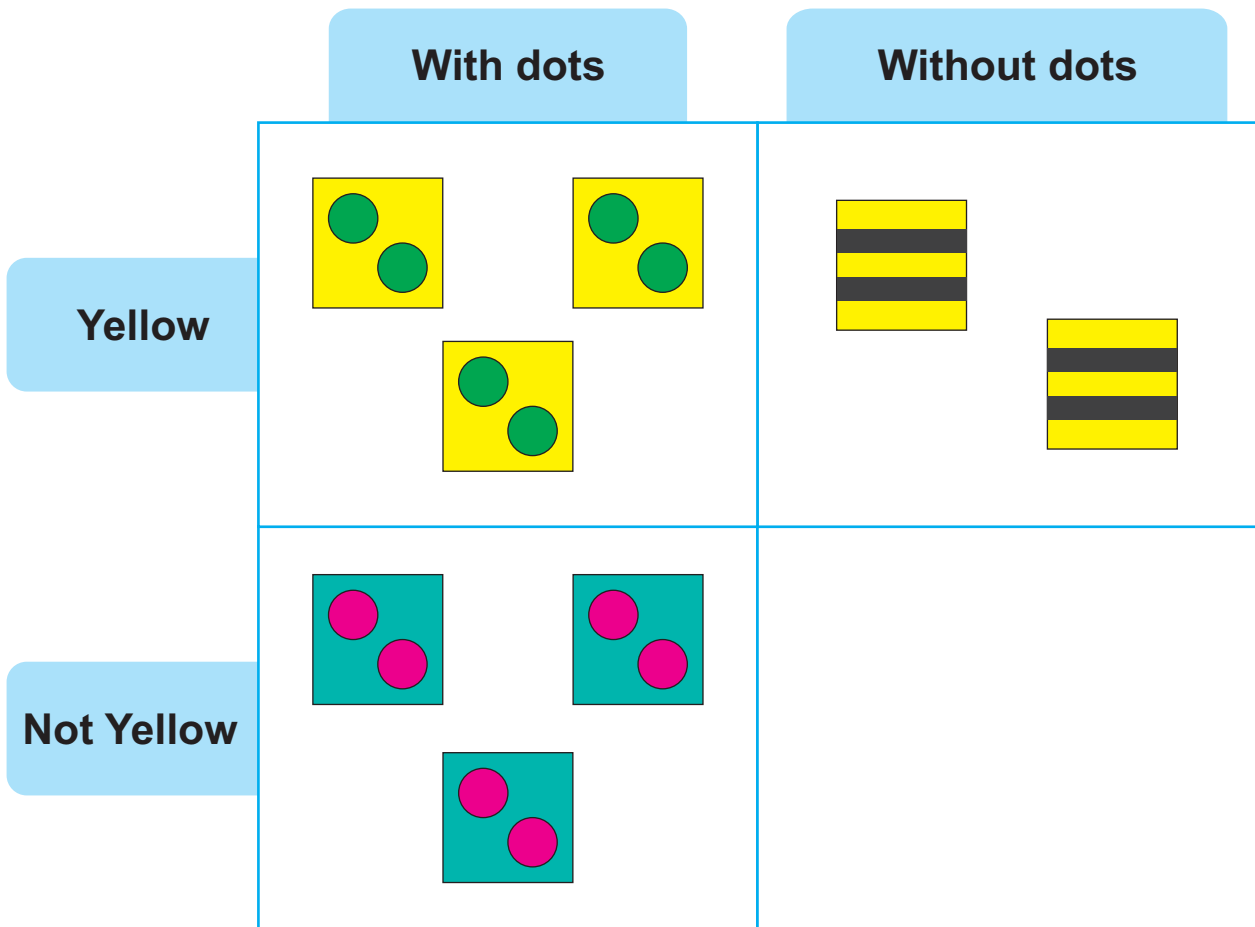
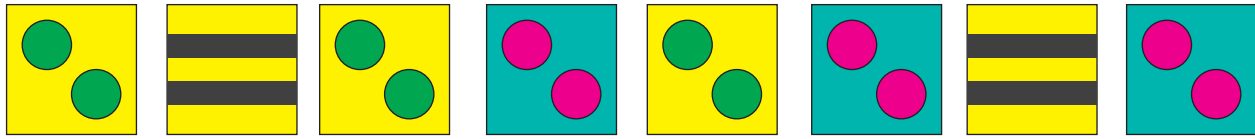
11. Complete the following table.

Object	Name	Number of edges	Number of faces	Number of vertices
	Pyramid	8	5	5
	Cuboid	12	6	8
	Cube	12	6	8

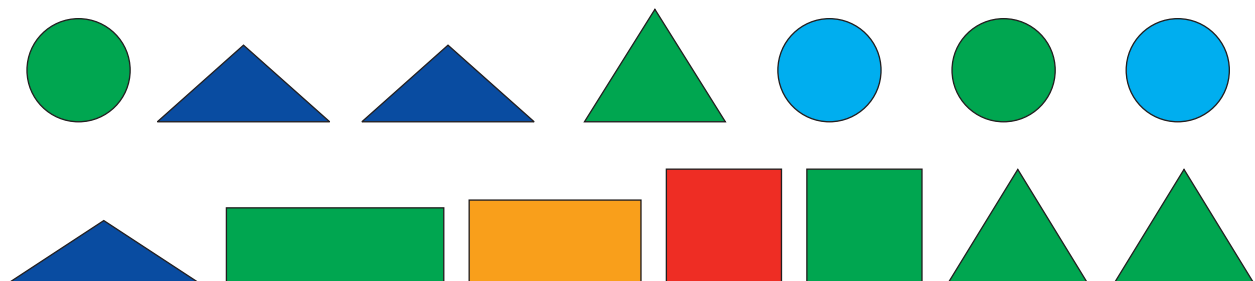
Unit 7: Data Handling

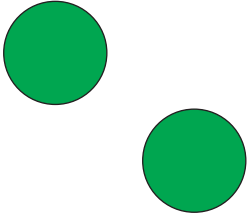
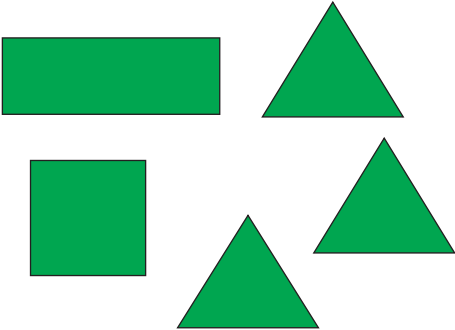
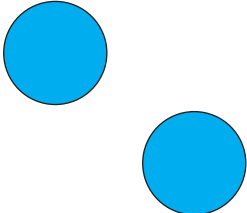
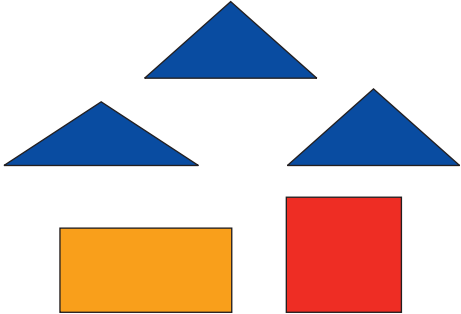
Learning Check 7.1

1. Sort out the following designs by drawing them in a Carroll diagram.



2. Sort out the following shapes by drawing them in a Carroll diagram.



	Circles	Not Circles
Green		
Not Green		

3. Complete the following Carroll diagram using the numbers 12, 24, 32, 35, 36, 43, 42, 77.

	In 6 times table	Not in 6 times table
Even	12, 24, 36, 42	32
Odd		35, 77, 43

4. Look at this Carroll diagram and answer the questions below.

	Less than 10	More than 10
In 2 times table	2, 4, 6	12, 14, 18
Not in 2 times table	3, 7	13, 17, 19

a) Which numbers are more than 10 but not in the 2 times table?

13, 17, 19

b) Which numbers are less than 10 and in the 2 times table?

2, 4, 6

c) Which numbers are more than 10 and in the 2 times table?

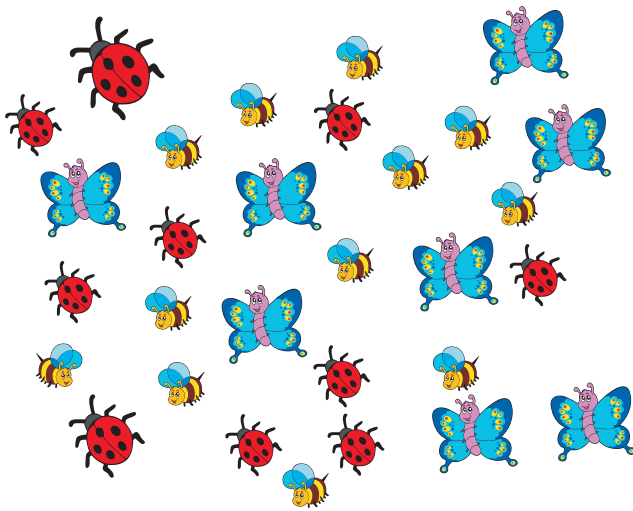
12, 14, 18

d) Which numbers are less than 10 but not in the 2 times table?

3, 7

Learning Check 7.2

1. Count the insects and show the data in a tally chart.



Insects	Tally
Butterfly	IIII III
Honeybee	IIII IIII II
Ladybird	IIII IIII

2. The data shows dresses of different colours in a boutique. Show this data in a tally chart.

Colour	Red	Blue	Green	White	Yellow
Number of dresses	15	7	8	3	4

Colour	Number of dresses	Tally
Red	15	IIII IIII IIII
Blue	7	IIII II
Green	8	IIII III
White	3	III
Yellow	4	IIII

3. The following tally chart shows the favourite bakery items of grade 3 students.

Bakery item	Tally
bread	IIII
donut	IIII III
cupcake	III
biscuit	IIII II
fruit cake	IIII

a) How many students like bread? 5

b) How many students like cupcakes? 3

c) Which is the most favourite item? Donut (8)

d) Which is the least favourite item? Cupcake (3)

e) How many more students like donuts than cupcakes? $8 - 3 = 5$

f) How many students talked about their favourite bakery items? $5 + 8 + 3 + 7 + 5 = 28$

Learning Check 7.3

1. The following picture graph shows the birthdays of grade 3 students in different months. Here 1 picture shows 5 students. Observe it and answer the given questions.



- a) How many students have birthdays in February? $4 \times 5 = 20$
- b) How many more students have birthdays in June than in November? $50 - 35 = 15$
- c) In which two months an equal number of students have birthdays? In April and November
- d) In which month the least number of students have birthdays? In February
- e) How many less students have birthdays in May than in June? $50 - 25 = 25$

2. The following table shows the number of different flavours of juice sold in a shop on Saturday. Here 1 picture represents 10 glasses. Observe it and answer the questions given below.

Apple	
Orange	
Pomegranate	
Grapes	

a) Which flavour is the least favourite?

Grapes (40)

b) How many glasses of juice were sold altogether?

$$120 + 60 + 60 + 40 = 280$$

c) Which flavour is the most favourite?

Apple (120)

d) How many more glasses of apple juice were sold than glasses of orange juice?

$$120 - 60 = 60$$

e) How many glasses of orange and apple juice were sold altogether?

$$120 + 60 = 180$$

Unit Check 7

1. Encircle the correct options.

a) We use a _____ to sort objects according to two attributes.

- i) ☒ Carroll diagram ii) picture graph
iii) tally chart iv) bar graph

b) The symbol _____ is used for a tally mark.

- i) ☒ / i) = iii) # iv) ^

c) A _____ is a table with tally marks.

- i) Carroll diagram ii) picture graph
☒ iii) tally chart iv) bar graph

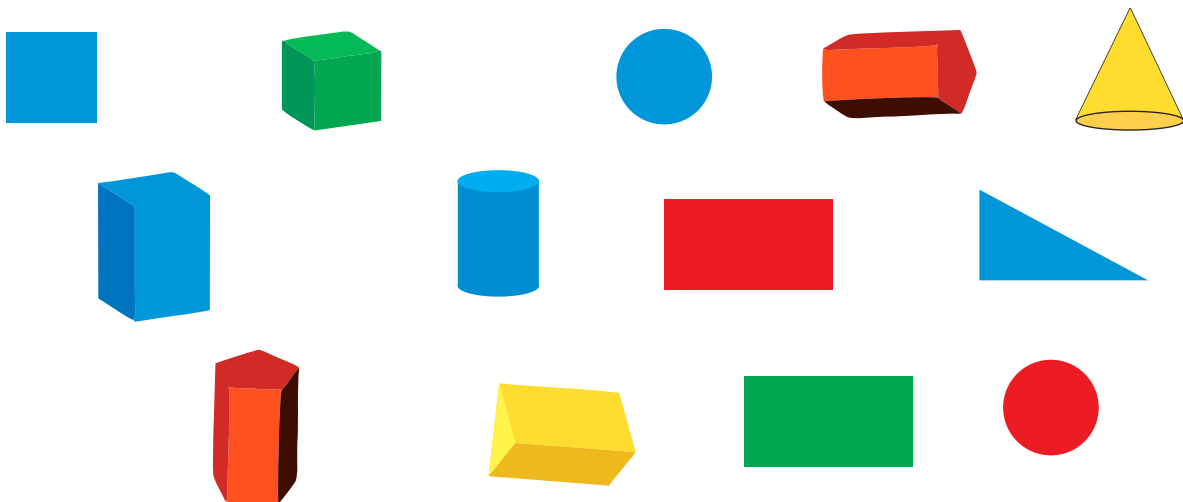
d) A _____ is used to count and sort items in the form of pictures.

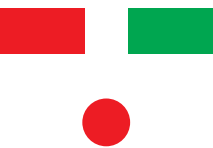
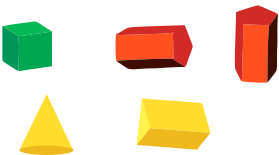
- i) Carroll diagram ☒ ii) picture graph
iii) tally chart iv) bar graph

e) In a tally chart, _____ tally marks are crossed to show the value of 5.

- i) 1 ii) 2 iii) 3 ☒ iv) 4

2. Complete the following Carroll diagram using the shapes given below.



	2-D Shape	Not a 2-D Shape
Blue		
Not Blue		

3. Complete the following Carroll diagram using the numbers 3, 4, 5, 7, 9, 13, 14, 16, 17, 18, 21, 24.

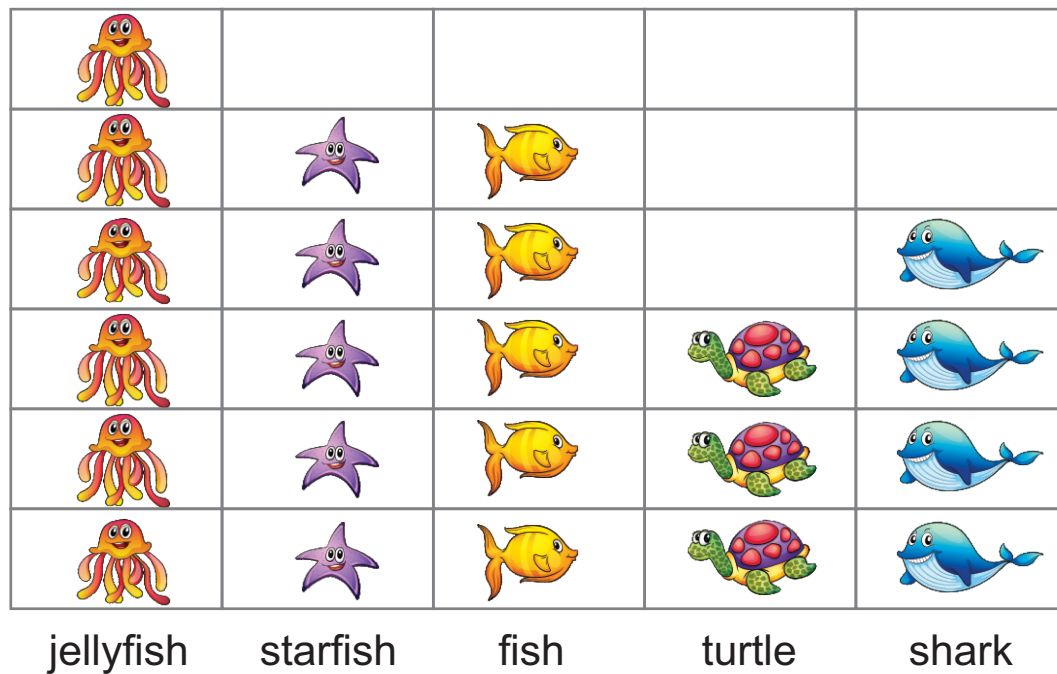
	In 3 times table	Not in 3 times table
Less than 12	3, 9	4, 5, 7
More than 12	18, 21, 24	13, 14, 16, 17

4. The following tally chart shows the favourite subjects of grade 3 students.

Subjects	Tally
English	IIII
Urdu	IIII I
Maths	IIII
Science	IIII III
Computer	IIII II

- a) a)How many students like Computer? 7
- b) How many students like Urdu? 6
- c) Which is the most favourite subject? Science (8)
- d) Which is the least favourite subject? Maths (4)

5. The following picture graph shows the number of favourite sea animals of grade 3 students. Answer the given questions and also organise it using a tally chart.



a) Which sea animal is the least favourite?

Turtle (3)

b) How many students told their favourite sea animal?

$$6 + 5 + 5 + 3 + 4 = 23$$

c) Which sea animal is the most favourite?

Jellyfish (6)

d) How many more students like jellyfish than fish?

$$6 - 5 = 1$$