Unit 1 : Whole Numbers

Friendly Notes

Numbers to 1,000,000

There are 382,746 people living in Country X. The place value of each digit in 5,382,746 is as follows:

Hundred thousands	Ten thousands	Thousands	Hundreds	Tens	Ones
3	8	2	7	4	6
↓	↓	↓	↓	↓	↓
300,000	80,000	2,000	700	40	6

In 382,746

- 3 is in the hundred thousands place,
- 8 is in the ten thousands place,
- 2 is in the thousands place,
- 7 is in the hundreds place,
- 4 is in the tens place,
- 6 is in the ones place.

We write 382,746 in words as three hundred eighty-two thousand, seven hundred forty-six.

382,746 is the **standard form**.

300,000 + 80,000 + 2,000 + 700 + 40 + 6 is the **expanded form** of 382,746.

Approximation

When we round up or round down values, these rounded values are only **approximations**. We use the symbol '≈' to show approximation. '≈' means 'is approximately equal to'.

To round a number to a certain place value, we look at the digit in the next lower place value. If the digit is 0, 1, 2, 3, or 4, we round down. If it is 5, 6, 7, 8, or 9, we round up.

Round 381,479 to the nearest

(a) ten,

(b) hundred,

(c) thousand,

(d) ten thousand,

(e) hundred thousand.

(a) 381,479 ≈ 381,480

(b) 381,479 ≈ 381,500

(c) 381,479 ≈ 381,000

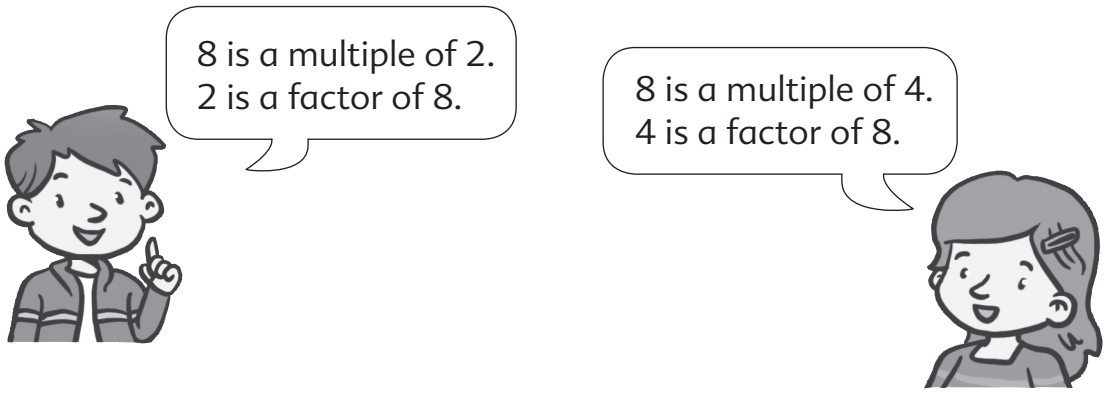
(d) 381,479 ≈ 380,000

(e) 381,479 ≈ 400,000

Multiples

The table shows the first ten multiples of 2, 3, 4, 5, 6, 7, 8, 9, and 10.

×	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	(24)	27	30
4	4	8	12	16	20	(24)	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	(48)	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	(48)	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

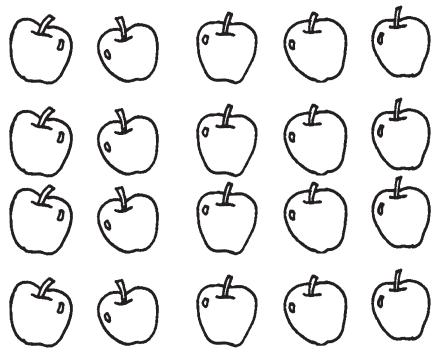


From the table, we can see common multiples.
For example, 24 is a common multiple of 6 and 8.
48 is also a common multiple of 6 and 8.
So, there is more than one common multiple of 6 and 8.

6 and 8 are factors of 24 and 48.

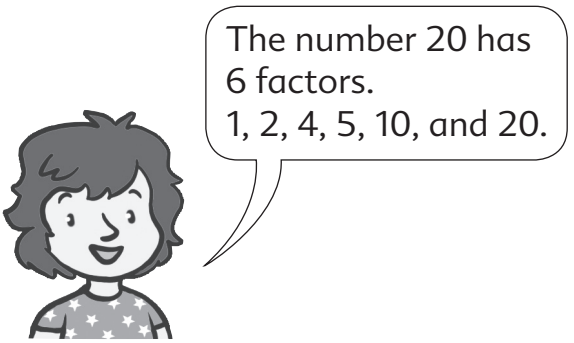
Factors

Factor × factor = product



$4 \times 5 = 20$
4 and 5 are factors of 20.

$1 \times 20 = 20$
$2 \times 10 = 20$



1, 2, 10, and 20 are also factors of 20.

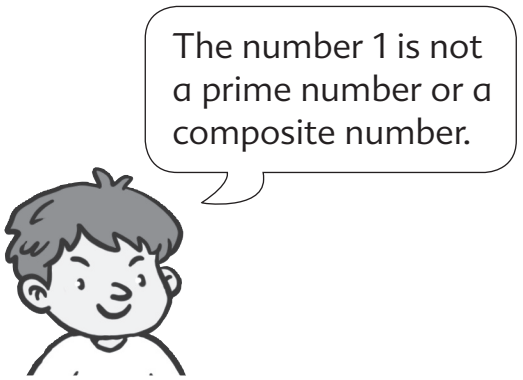
Some numbers have exactly 2 factors.

A number greater than 1 is called a **prime number** if it has exactly **two factors**, 1 and the number itself.

$1 \times 3 = 3$, $1 \times 5 = 5$, $1 \times 7 = 7$, ...
3, 5, 7, ... are prime numbers.

A number greater than 1 is a **composite number** if it has more than two factors.

$1 \times 4 = 4$, $2 \times 2 = 4$
The factors of 4 are 1, 2, and 4.
Therefore, 4 is a composite number.



Order of Operations

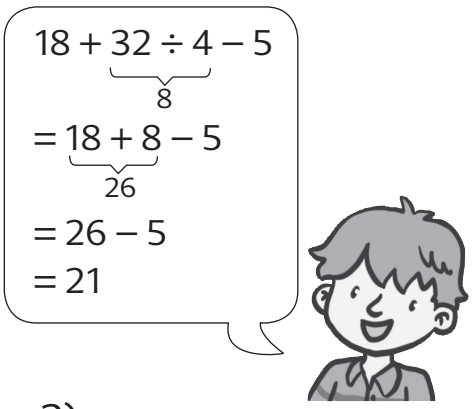
An expression has numbers and operation signs (+, −, ×, ÷) but no equal sign.
An equation is a number sentence with an equal sign.
The value on each side of the equal sign is the same.

When an expression involves different operation signs and parentheses, we proceed as follows:

- Do what is in the parentheses first.
- Next, carry out multiplication or division from left to right.
- Then carry out addition or subtraction from left to right.

1. Find the value of $18 + 32 \div 4 - 5$.

$$18 + 32 \div 4 - 5 = 18 + 8 - 5$$
$$= 26 - 5$$
$$= 21$$



2. Find the value of $32 + (16 - 2) \times (4 \div 2)$.

$$32 + (16 - 2) \times (4 \div 2) = 32 + \underbrace{14 \times 2}_{28}$$
$$= 32 + 28$$
$$= 60$$

Unit 2 : The Four Operations of Whole Numbers

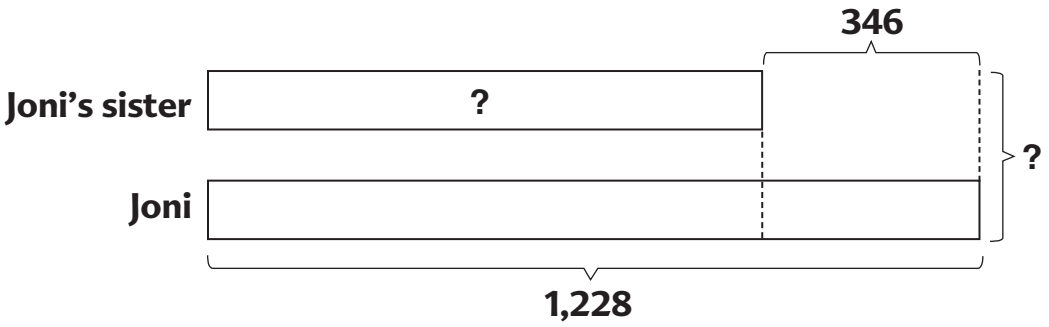
Friendly Notes

Addition and Subtraction

When we add two or more numbers, we get their **sum**.
When we subtract two or more numbers, we find their **difference**.
We can draw models to help us with addition and subtraction.

Joni has 1,228 seashells.
Her sister has 346 fewer seashells than Joni.

(a) How many seashells does Joni's sister have?
(b) How many seashells do they have altogether?



(a) 1,228 – 346 = 882

Joni's sister has 882 seashells.

(b) 1,228 + 882 = 2,110

They have 2,110 seashells altogether.

Multiplication and Division

When we multiply two or more numbers, we find their **product**. When a number is divided by another number exactly, the answer is the **quotient**. When a number is not exactly divided by another number, the answer is the quotient and the **remainder**.

We can multiply a 3-digit number by a 2-digit number as follows:

1. Find the product of 297 and 29.

$$\begin{array}{r} 297 \\ \times\ \ 29 \\ \hline 2,673 \\ 5,940 \\ \hline 8,613 \end{array}$$

	200	90	7	
20	$200 \times 20 = 4{,}000$	$90 \times 20 = 1{,}800$	$7 \times 20 = 140$	4,000 1,800 140
9	$200 \times 9 = 1{,}800$	$90 \times 9 = 810$	$7 \times 9 = 63$	1,800 810 + 63
				8,613

$297 \times 29 = 297 \times 30 - 297$
$297 \times 30 = 8{,}910$
$8{,}910 - 297 = 8{,}613$
$297 \times 29 = 8{,}613$

We can divide a 4-digit number by another number as follows:

2. Find the value of $3{,}468 \div 6$.

$$\begin{array}{r} 578 \\ 6\overline{)3,468} \\ 30 \\ \hline 46 \\ 42 \\ \hline 48 \\ 48 \\ \hline 0 \end{array}$$

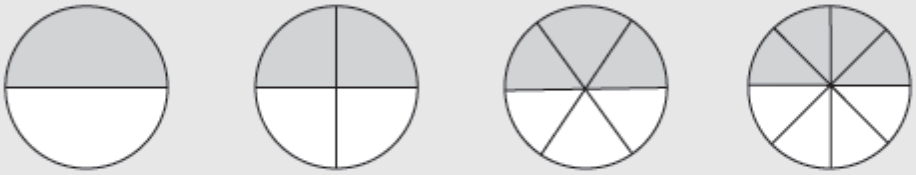
578 ← quotient
30 ← 5×6
42 ← 7×6
48 ← 8×6

	6	
500	3,000	3,468 − 3,000
70	420	468 − 420
8	48	48 − 48
		0

Unit 3 : Fractions

Friendly Notes

Equivalent Fractions



$\frac{1}{2}$ $\frac{2}{4}$ $\frac{3}{6}$ $\frac{4}{8}$

We can see that the size of each circle is the same.

We notice that half of each circle is shaded.

So, $\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8}$.

$\frac{1}{2}$, $\frac{2}{4}$, $\frac{3}{6}$, and $\frac{4}{8}$ are called **equivalent fractions**.

$\frac{1}{2}$ is a fraction in its **simplest form**.

Name two equivalent fractions of $\frac{4}{12}$.

$\frac{4}{12} \overset{\div 4}{\underset{\div 4}{}} = \frac{1}{3}$

$\frac{4}{12} \overset{\times 2}{\underset{\times 2}{}} = \frac{8}{24}$

We can divide or multiply the numerator and the denominator by the same number to get equivalent fractions.

Adding and Subtracting Like Fractions

We can only add or subtract fractions when their denominators are the same.

1. Add.

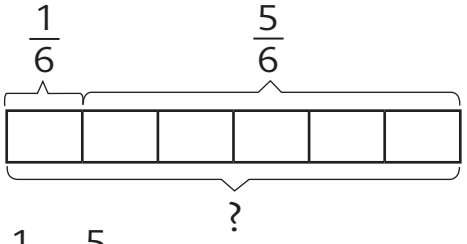
(a) $\frac{2}{5} + \frac{1}{5}$

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

(b) $\frac{1}{8} + \frac{4}{8} + \frac{3}{8}$

$\frac{1}{8} + \frac{4}{8} + \frac{3}{8} = 1$

2. Find the sum of $\frac{1}{6}$ and $\frac{5}{6}$.



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

3. Subtract.

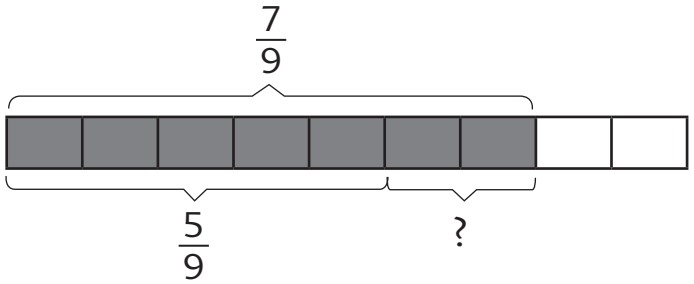
(a) $\frac{5}{6} - \frac{4}{6}$

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

(b) $1 - \frac{5}{12} - \frac{2}{12}$

$1 - \frac{5}{12} - \frac{2}{12} = \frac{12}{12} - \frac{5}{12} - \frac{2}{12} = \frac{5}{12}$

4. Find the difference between $\frac{7}{9}$ and $\frac{5}{9}$.



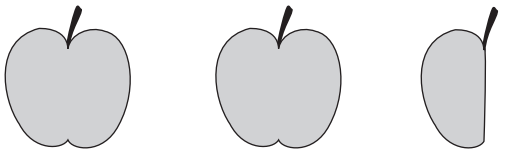
$\frac{7}{9} - \frac{5}{9} = \frac{2}{9}$

Mixed Numbers

We get a **mixed number** when we add a whole number and a fraction.

$5\frac{1}{3}$, $6\frac{3}{7}$, and $8\frac{3}{8}$ are mixed numbers.

1. Write a mixed number.

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

   (b) 6 wholes 5 sevenths $= 6\frac{5}{7}$

2. Find the value of each of the following.

   (a) $7 + \frac{3}{4}$

   $7 + \frac{3}{4} = 7\frac{3}{4}$

   (b) $9 - \frac{1}{3}$

   $9 - \frac{1}{3} = 8\frac{3}{3} - \frac{1}{3}$

   $= 8\frac{2}{3}$

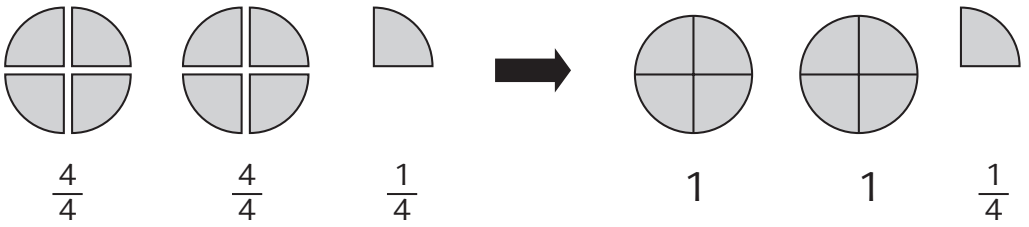
Improper Fractions

In an **improper fraction**, the numerator is greater than or equal to its denominator.
Improper fractions are equal to or greater than 1.
We can express an improper fraction as a whole number or a mixed number.

1. Circle the improper fractions.

$\frac{1}{2}$, $\frac{5}{5}$, $\frac{2}{4}$, $\frac{6}{5}$, $\frac{9}{8}$, $\frac{1}{1}$

2. Change the improper fraction $\frac{9}{4}$ to a mixed number.



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

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

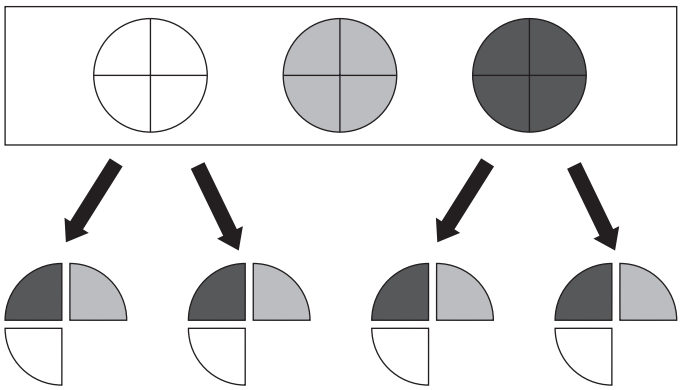
$\frac{9}{4} = 2\frac{1}{4}$

3. Change $4\frac{3}{5}$ into an improper fraction.

$$4\frac{3}{5} = 4 + \frac{3}{5}$$
$$= \frac{20}{5} + \frac{3}{5}$$
$$= \frac{23}{5}$$

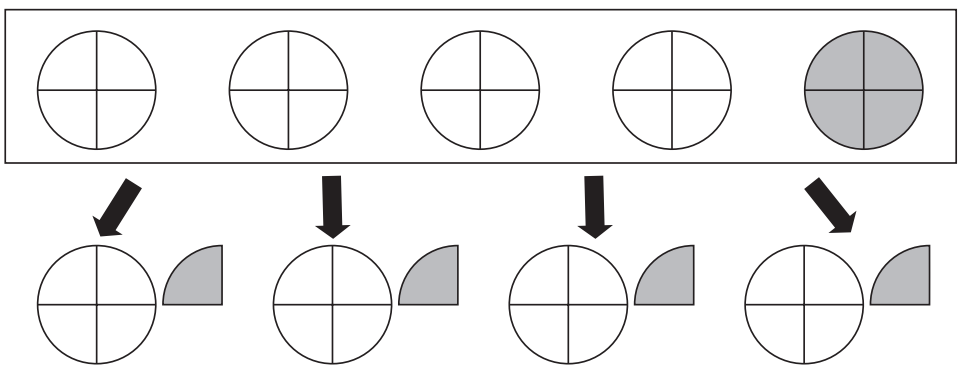
Fractions and Division

1. Share 3 pizzas equally among 4 children.
   Each child receives 3 fourths.



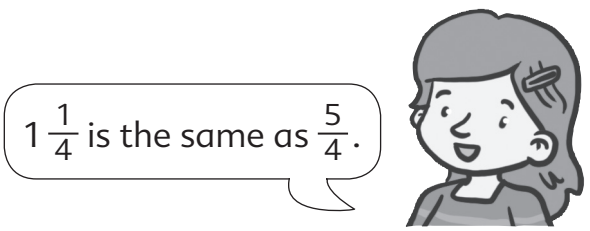
$3 \div 4 = \frac{3}{4}$

2. Share 5 pizzas equally among 4 children.
   Each child receives 5 fourths.



$5 \div 4 = 1\frac{1}{4}$

$$4\overline{)\,5}\;\;1$$
$$\underline{4}$$
$$1$$



3. Find the value of $32 \div 6$.

Method 1:

$32 \div 6 = 5\frac{2}{6}$

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

$$6\overline{)32}\quad 5,\ 30,\ 2$$

Method 2:

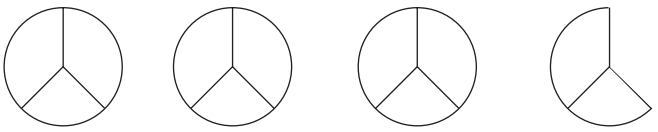
$32 \div 6 = \frac{32}{6}$

$= \frac{16}{3}$

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

4. Express $\frac{11}{3}$ as a mixed number.

Method 1:



$\frac{11}{3} = \frac{9}{3} + \frac{2}{3}$

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

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

Method 2:

$\frac{11}{3} = 11 \div 3$

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

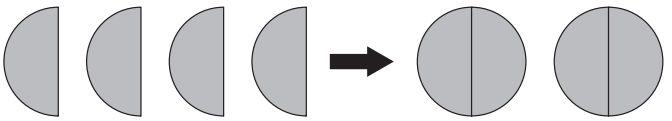
$$3\overline{)11}\quad 3,\ 9,\ 2$$

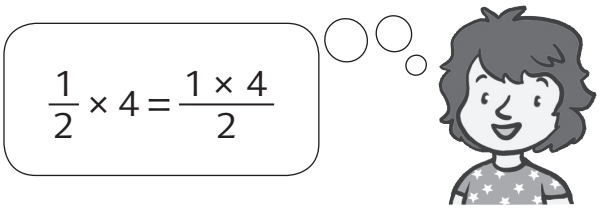
Multiplying a Fraction and a Whole Number

We can multiply a fraction and a whole number. If we get an answer that is an improper fraction, we must express the improper fraction as a whole number or a mixed number in the simplest form.

1. Multiply $\frac{1}{2}$ by 4.

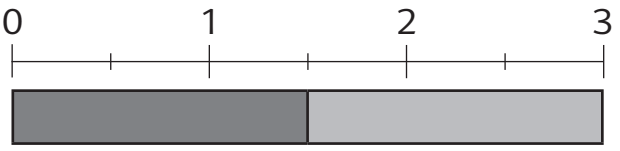
$$\frac{1}{2} \times 4 = \frac{4}{2}$$
$$= 2$$

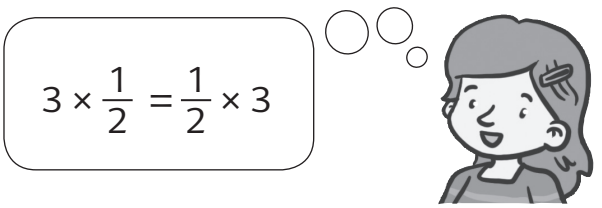




2. Multiply 3 by $\frac{1}{2}$.

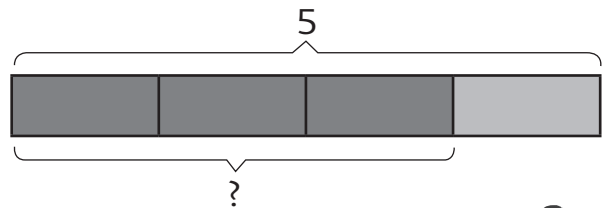
$$3 \times \frac{1}{2} = \frac{3}{2}$$
$$= 1\frac{1}{2}$$

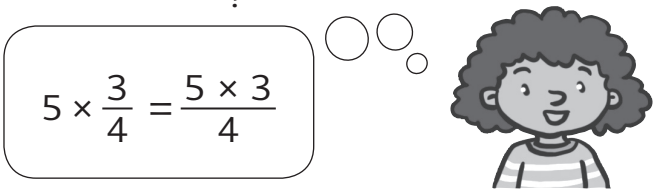




3. Multiply 5 by $\frac{3}{4}$.

$$5 \times \frac{3}{4} = \frac{15}{4}$$
$$= 3\frac{3}{4}$$





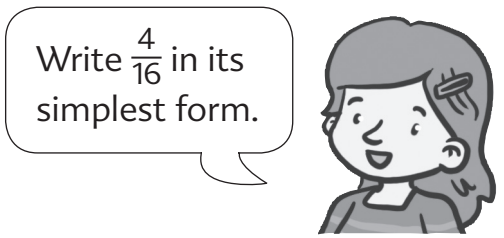
Fraction of a Set

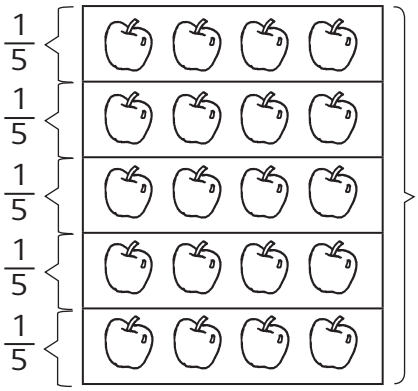
1. This is a set of fruits.
What fraction of the set of fruits are mangoes?

There are 16 fruits in the set. 4 of the fruits are mangoes.

$\frac{4}{16} = \frac{1}{4}$

$\frac{1}{4}$ of the fruits are mangoes.

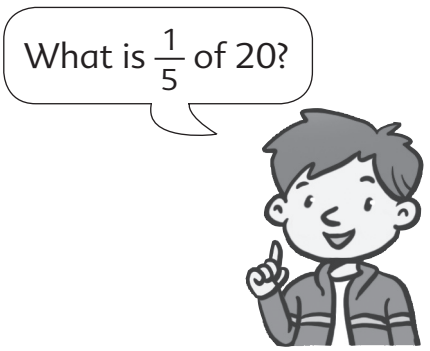


2. 

(a) How many apples does each child get?
There are 20 apples. There are 5 children.
Each child gets the same number of apples.

$\frac{1}{5}$ of $20 = \frac{1}{5} \times 20 = \frac{20}{5}$
$= 4$

Each child gets 4 apples.



(b) What is $\frac{2}{5}$ of 20?

$\frac{2}{5}$ of $20 = \frac{2}{5} \times 20 = \frac{40}{5}$
$= 8$

Two children get 8 apples altogether.

Unit 5 : Measures

Friendly Notes

Looking Back

The centimeter (cm), meter (m), and kilometer (km) are metric units of length.
The yard (yd) and inch (in.) are other units of length.

1 m = 100 cm
1 km = 1,000 m
1 yd = 3 ft
1 ft = 12 in.

1. Write 7 m 87 cm in centimeters.

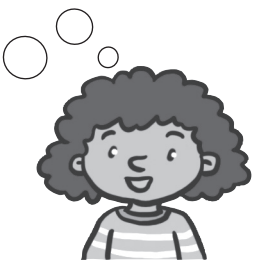
   7 m 87 cm = 700 cm + 87cm
   = 787 cm

   7 m = 7 × 100 cm
   = 700 cm

2. Write 654 cm in meters and centimeters.

   654 cm = 6 m 54 cm

   654 cm = 600 cm + 54 cm
   600 cm = 6 m



3. Write 3 km 899 m in meters.

   3 km 899 m = 3,000 m + 899 m
   = 3,899 m

   3km = 3 × 1,000 m
   = 3,000 m

4. Write 5,231 m in kilometers and meters.

5,231 m = 5 km 231 m

5,231 m = 5,000 m + 231 m

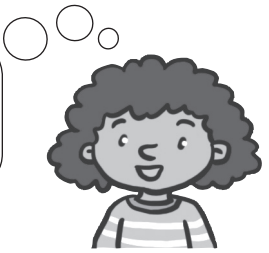
5. Write 11 yd in feet.

11 yd = 11 × 3 ft

= 33 ft

1 yd = 3 ft

5,000 m = 5 km



6. Write 14 yd 6 ft in feet.

14 yd 6 ft = 42 ft + 6 ft

= 48 ft

14 yd = 14 × 3 ft

= 42 ft

7. Write 146 ft in yards.

146 ft = 48 yd 2 ft

146 ft

/ \

48 yd 2 ft

8. Write 4 ft 7 in. in inches.

4 ft 7 in. = 48 in. + 7 in.

= 55 in.

1 ft = 12 in.

4 ft = 4 × 12 in.

= 48 in.

The gram (g) and kilogram (kg) are metric units of mass.
The pound (lb) and ounce (oz) are other units of weight.

1 kg = 1,000 g 1 lb = 16 oz

9. Write 5 kg 56 g in grams.

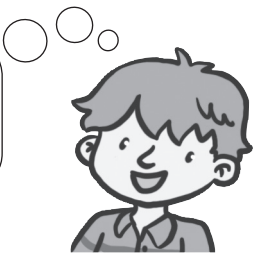
5 kg 56 g = 5,000 g + 56 g
= 5,056 g

1 kg = 1,000 g
5 kg = 5 × 1,000 g
= 5,000 g

10. Write 1,001 g in kilograms.

1,001 g = 1 kg 1 g

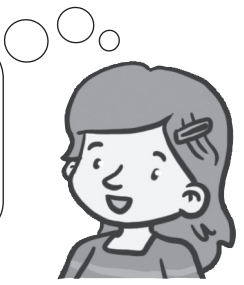
1,001 g = 1,000 g + 1 g
1,000 g = 1 kg



11. Write 4 lb 10 oz in ounce.

4 lb 10 oz = 64 oz + 10 oz
= 74 oz

1 lb = 16 oz
4 lb = 4 × 16 oz
= 64 oz



12. Write 86 oz in pounds and ounce.

80 oz = 5 lb
86 oz = 5 lb 6 oz

86 oz
/ \
80 oz 6 oz

The second, minute, hour, day, week, and year are units of time.

1 year = 12 months
1 week = 7 days
1 day = 24 hours
1 hour = 60 minutes
1 minute = 60 seconds

13. Write 4 years in months.

4 years = 4 × 12
= 48 months

14. Write 3 weeks in days.

3 weeks = 3 × 7
= 21 days

15. Write 9 minutes in seconds.

9 minutes = 9 × 60
= 540 seconds

The milliliter (ml) and liter (L) are metric units of capacity. The gallon (gal), quart (qt), pint (pt), and cup (c) are other units of capacity.

1 L = 1,000 ml
1 gal = 4 qt
1 qt = 2 pt
1 pt = 2c

16. Write 8 L 552 ml in milliliters.

8 L 552 ml = 8,000 ml + 552 ml
= 8, 552 ml

1 L = 1,000 ml
8 L = 8 × 1,000 ml
= 8,000 ml

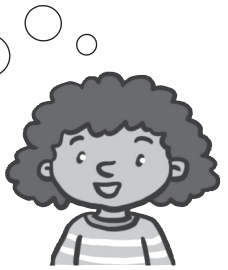
Adding and Subtracting Measures

1. 1 kg 300 g + 2 kg 900 g
   = 4 kg 200 g

1 kg + 2 kg = 3 kg
300 g + 900 g = 1 kg 200 g
3 kg + 1 kg 200 g = 4 kg 200 g

2. 9 gal 2 qt − 5 gal 3 qt
   = 3 gal 3 qt

1 gal = 4 qt
9 gal 2 qt = 8 gal 6 qt
8 gal 6 qt − 5 gal 3 qt = 3 gal 3 qt



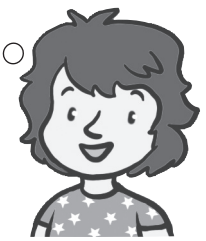
3. What is the total capacity of 1 L 45 ml and 8 L 672 ml?

1 L 45 ml $\xrightarrow{+\ 8\ \text{L}}$ 9 L 45 ml $\xrightarrow{+\ 672\ \text{ml}}$ 9 L 717 ml

1 L 45 ml + 8 L 672 ml = 9 L 717 ml

4. What is the difference in length between 9 km 4 m and 2 km 600 m?

9 km 4 m = 8 km + 1,000 m + 4 m
= 8 km 1,004 m



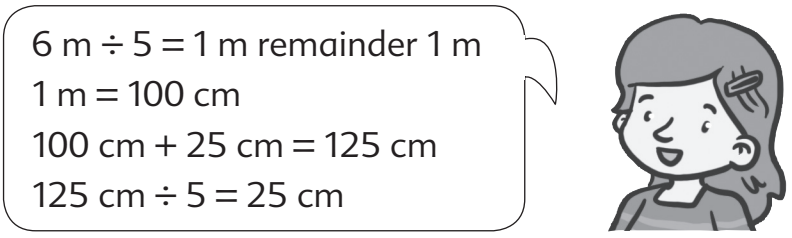
8 km 1,004 m $\xrightarrow{-\ 2\ \text{km}}$ 6 km 1,004 m $\xrightarrow{-\ 600\ \text{m}}$ 6 km 404 m

9 km 4 m − 2 km 600 m = 6 km 404 m

Multiplying and Dividing Measures

1. 2 kg 200 g × 2 = 4 kg 400 g

2. 6 m 25 cm ÷ 5 = 1 m 25 cm



Measures and Fractions

1. $\frac{1}{2}$ km $= \frac{1}{2} \times 1{,}000$
   $= 500$ m

2. $1\frac{1}{4}$ lb $= 1$ lb $+ \frac{1}{4}$ lb
   $= 16$ oz $+ \frac{1}{4} \times 16$
   $= 16$ oz $+ 4$ oz
   $= 20$ oz

3. $2\frac{3}{4}$ hours $= 2$ hours $+ \frac{3}{4}$ hours
   $= 120$ minutes $+ \frac{3}{4} \times 60$
   $= 120$ minutes $+ 45$ minutes
   $= 165$ minutes

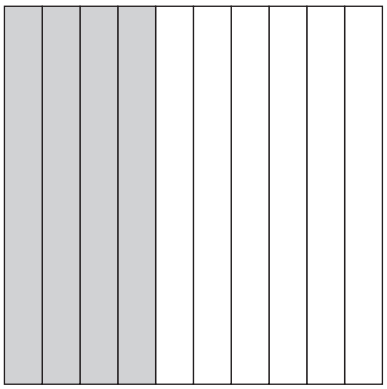
Unit 6 : Decimals

Friendly Notes

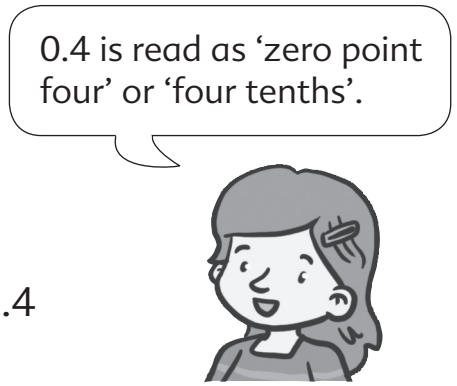
Tenths

When we divide one whole into 10 equal parts, each part is $\frac{1}{10}$ or **0.1**.
0.1 is a **decimal**. It stands for **1 tenth**.
The dot in a decimal is called a **decimal point**. The decimal point separates the whole from the fractional part.

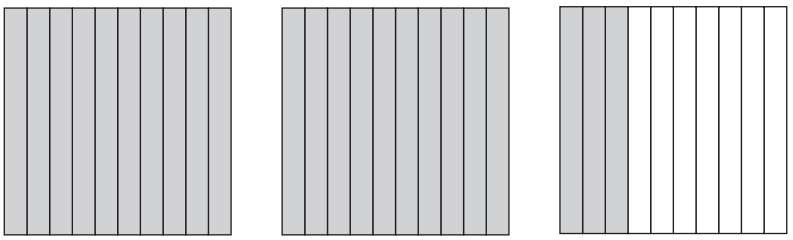
1. Write $\frac{4}{10}$ as a decimal.



$\frac{4}{10} = 0.4$



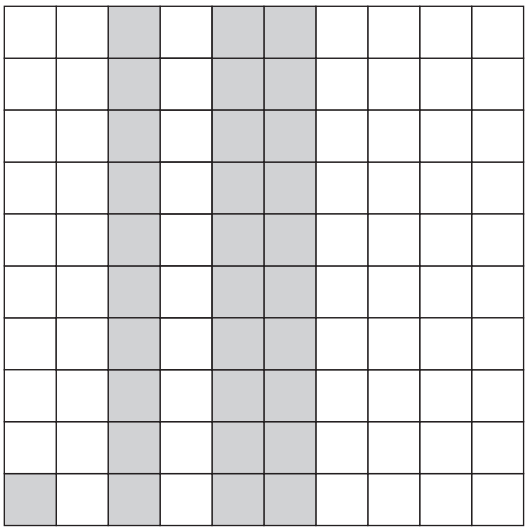
2. Write $2\frac{3}{10}$ as a decimal.



$2\frac{3}{10} = 2.3$

Hundredths

When we divide one whole into 100 equal parts, each part is $\frac{1}{100}$ or **0.01**.
0.01 stands for **1 hundredth**.
0.01 has two decimal places.



$\frac{1}{100} = 0.01$

$\frac{10}{100} = 0.10$

$\frac{20}{100} = 0.20$

We read 0.01 as 'zero point zero one' or 'one hundredth'.
We read 0.10 as 'zero point one zero' or 'one tenth' and 0.20 as 'zero point two zero' or 'two tenths'.

1. Write $2\frac{31}{100}$ as a decimal.

$2\frac{31}{100} = 2.31$

$2\frac{31}{100} = 2 + \frac{31}{100}$
$= 2 + 0.31$
$= 2.31$

Thousandths

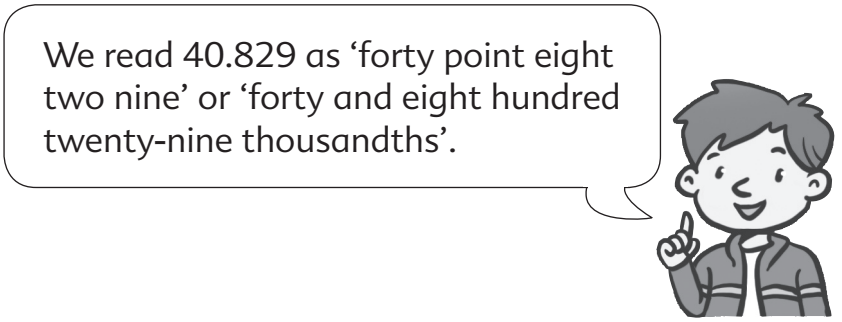
When we divide a whole into 1,000 equal parts, each part is $\frac{1}{1{,}000}$ or **0.001**.
0.001 stands for **one thousandth**.
0.001 has three decimal places.

1. Write each of the following as a decimal.

   (a) 5 ones 3 thousandths
   = 5.003

   (b) 8 tens 6 ones 5 tenths 2 thousandths
   = 86.502

   (c) 4 tens 8 tenths 2 hundredths 9 thousandths
   = 40.829

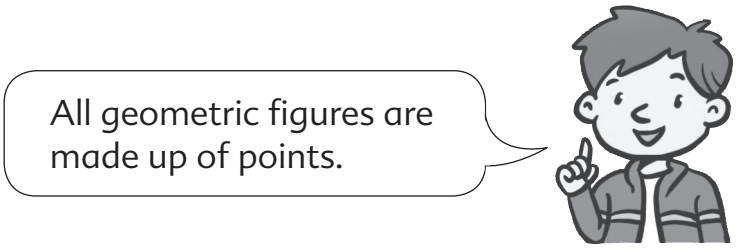


Unit 8 : Geometry

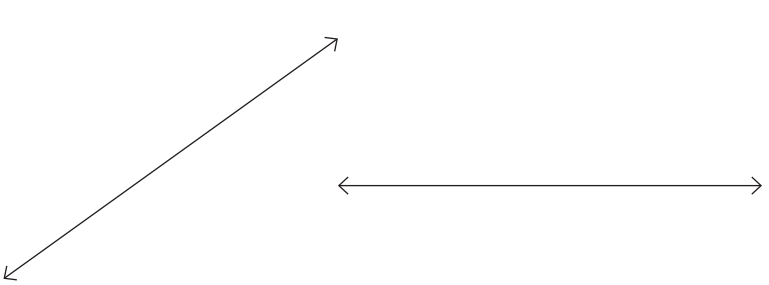
Friendly Notes

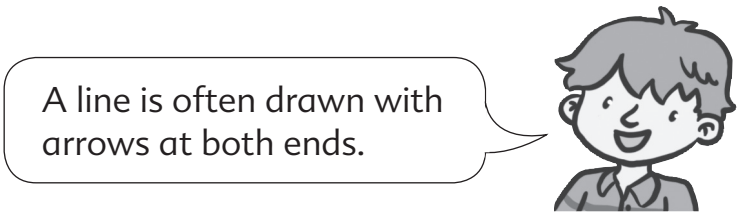
Points, Lines, Line Segments, Rays, and Angles

A point is a location in space.
A point is often represented by a dot and usually named with a capital letter.



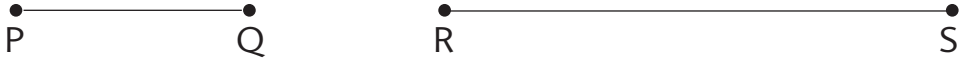
A line goes on forever in both directions.



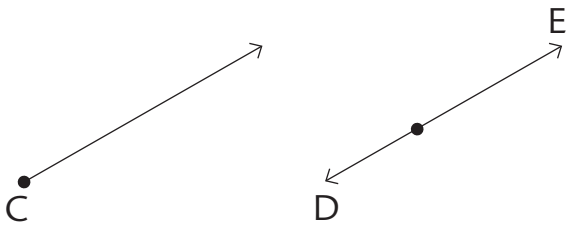


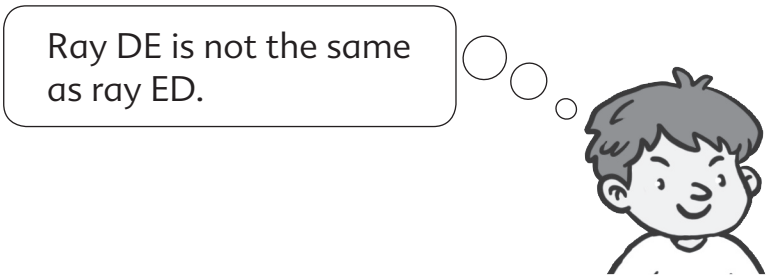
A line segment is part of a line between two points.

Line segment PQ is shorter than the Line segment RS.

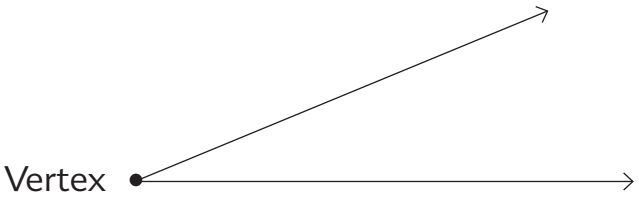


A ray is a line with one end point.

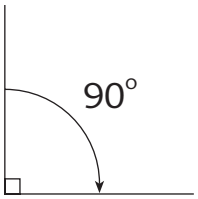
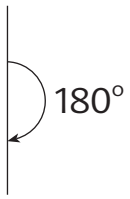
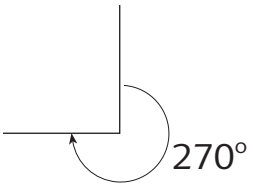
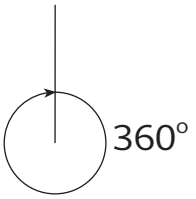


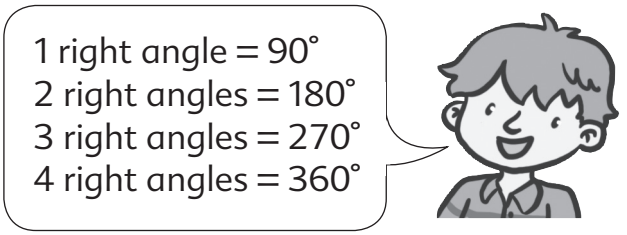


An angle is formed when two rays have the same endpoint. The point where the two end points meet is called the vertex.

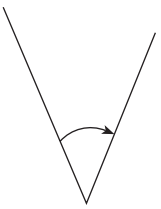


Right Angles

			
A $\frac{1}{4}$-turn forms a right angle.	A $\frac{1}{2}$-turn forms two right angles.	A $\frac{3}{4}$-turn forms 3 right angles.	A complete turn forms 4 right angles.

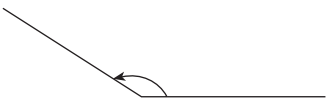


This angle is less than 90°.



It is called an **acute** angle.

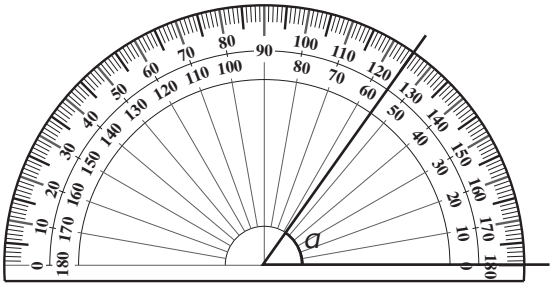
This angle is more than 90°.



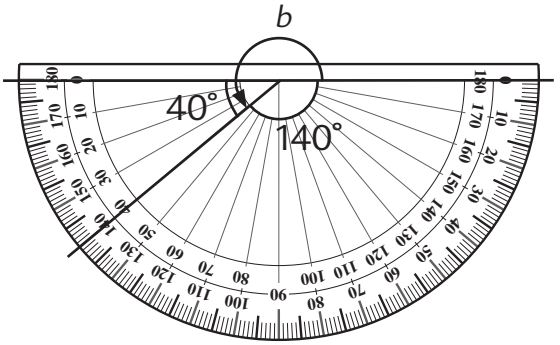
It is called an **obtuse** angle.

Measuring Angles

We use a protractor to measure angles.
We measure angles in degrees.



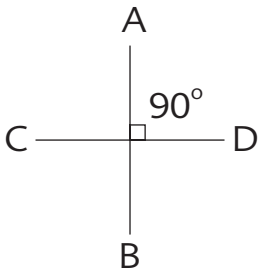
$m\angle a = 55^\circ$



$m\angle b = 180^\circ + 40^\circ$
$= 220^\circ$
OR
$m\angle b = 360^\circ - 140^\circ$
$= 220^\circ$

Perpendicular Lines

Perpendicular lines meet at right angles.

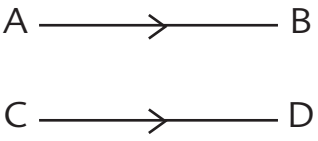


AB and CD are perpendicular lines.

We say AB is perpendicular to CD.
We write **AB** $\perp$ **CD**.

Parallel Lines

Parallel lines never meet.

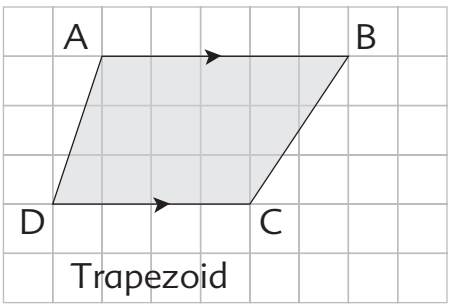


AB and CD are parallel lines.
We draw arrowheads on the lines to show they are parallel.

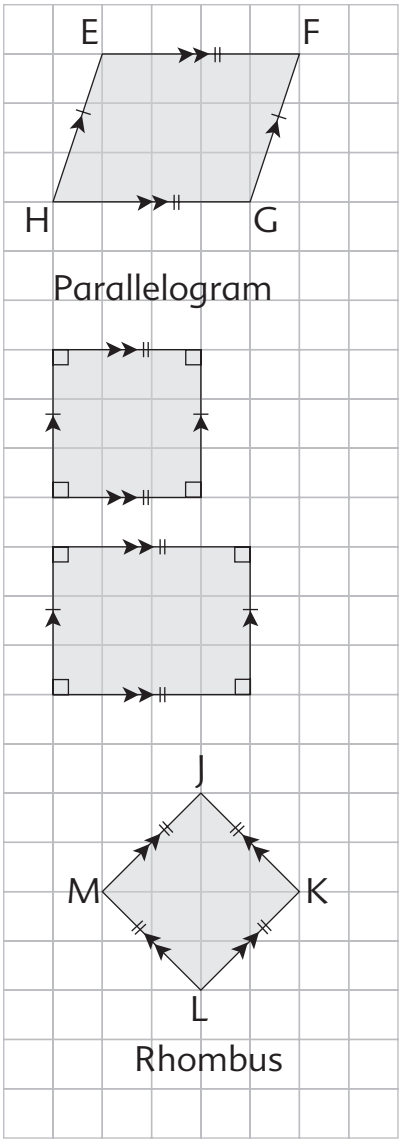
Quadrilaterals

A polygon is a closed figure with straight sides.
A **quadrilateral** is a 4-sided polygon.

These are quadrilaterals.



ABCD is a trapezoid.
It has at least one pair of parallel lines.

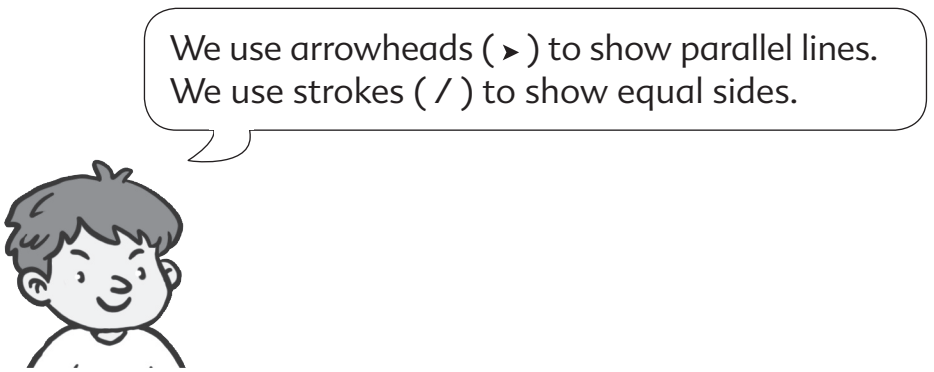


EFGH is a parallelogram.
It has two pairs of
parallel lines which are
equal on opposite sides.
So, a parallelogram is
a trapezaid.

A square has 4 equal sides.
It also has 4 equal angles.
Each angle = 90°

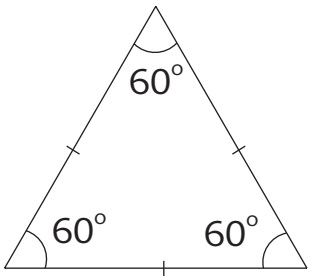
A rectangle has equal opposite sides.
It also has 4 equal angles.
Each angle = 90°
So, a square and a rectangle are both
parallelograms.

JKLM is a rhombus.
It has two pairs of parallel
lines. It has 4 equal sides.
It is a parallelogram with
equal sides.

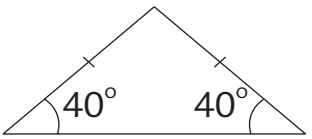


Triangles

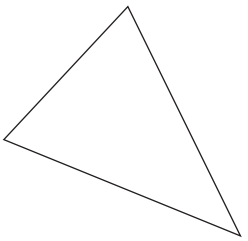
A **triangle** is a 3-sided polygon.
An equilateral triangle has 3 equal sides.
An isosceles triangle has 2 equal sides.
A scalene triangle has no equal sides.
An equilateral triangle is also an isosceles triangle.



Equilateral triangle



Isosceles triangle

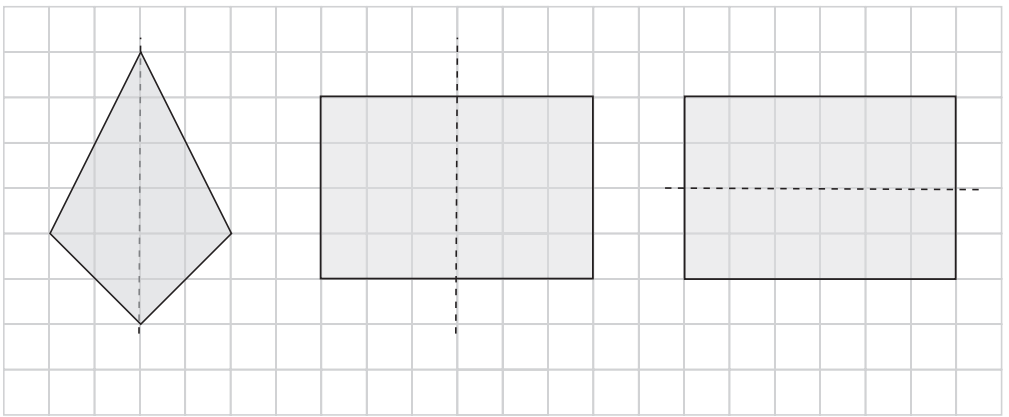


Scalene triangle

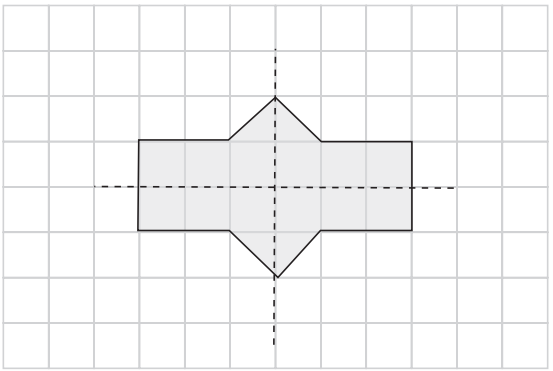
Line Symmetry

A symmetric figure has one or more lines of symmetry.
A **line of symmetry** divides a figure into two equal parts.
These equal parts fit exactly.

Each of the following figures has one line of symmetry.



The figure has more than one line of symmetry.

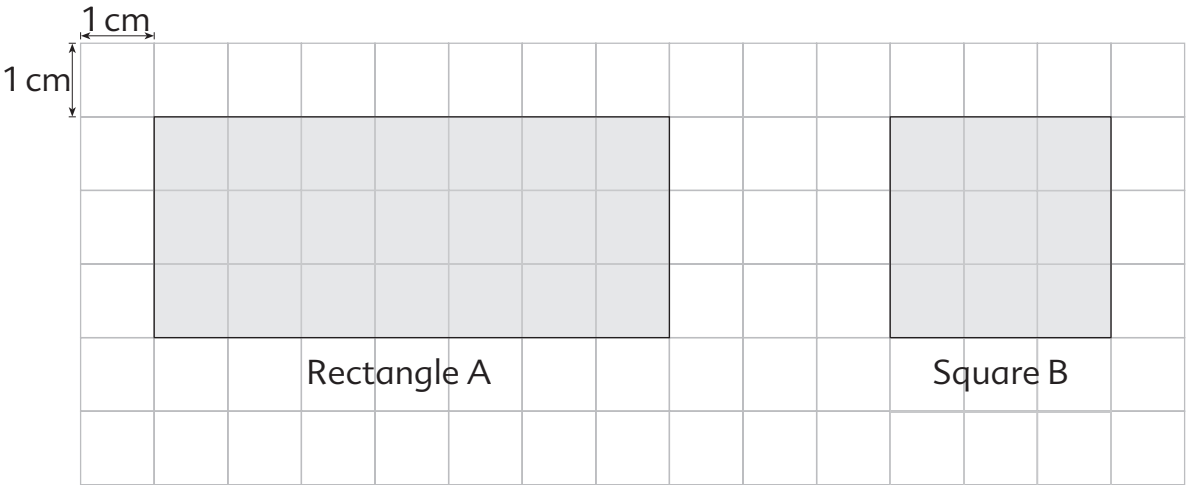


Unit 9 : Area and Perimeter

Friendly Notes

Rectangles and Squares

Area of a rectangle = length × width

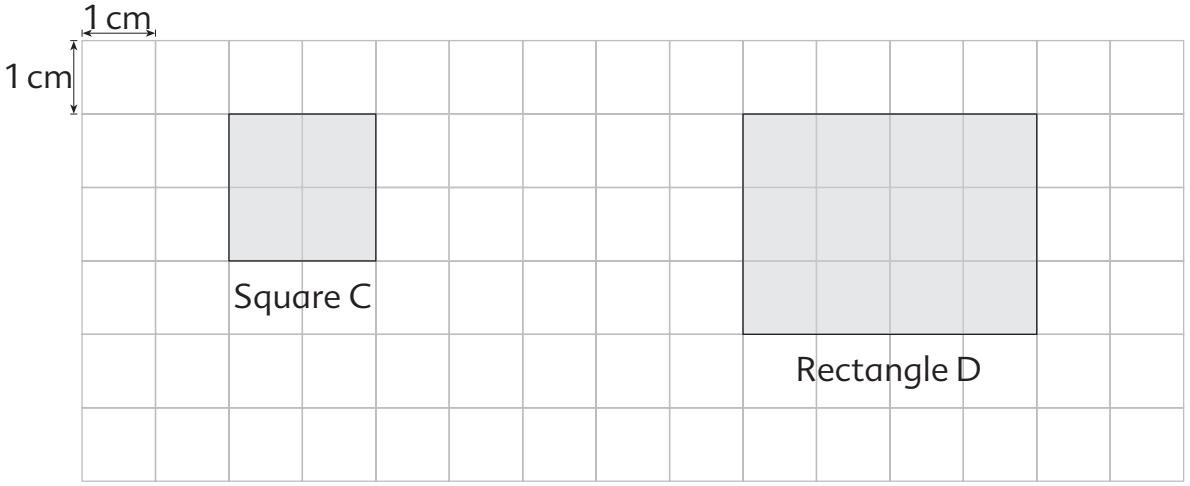


Each square in the grid has an area of 1 cm².
Rectangle A has an area of 21 cm².
Square B has an area of 9 cm².

Other units of area:
Square inch (in²)
Square meter (m²)
Square kilometer (km²)
Square foot (ft²)
Square yard (yd²)
Square mile (mi²)

1 cm² = 1 square centimeter
Area of Rectangle A
= 7 cm × 3 cm
= 21 cm²
Area of Rectangle B
= 3 cm × 3 cm
= 9 cm²

Perimeter of a rectangle = 2 × (length + width)



Perimeter of Square C = 4 × 2
= 8 cm

Perimeter of Rectangle D = 2 × (4 + 3)
= 14 cm

1. Find the area and perimeter of the rectangle below.

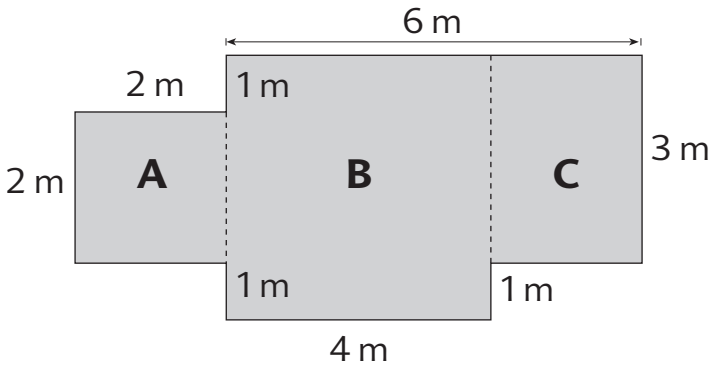
Area of rectangle = 6 m × 3 m
= 18 m²

Perimeter of rectangle = 6 m + 3 m + 6 m + 3 m
= 18 m

Composite Figures

A **composite figure** is made up of more than one shape.

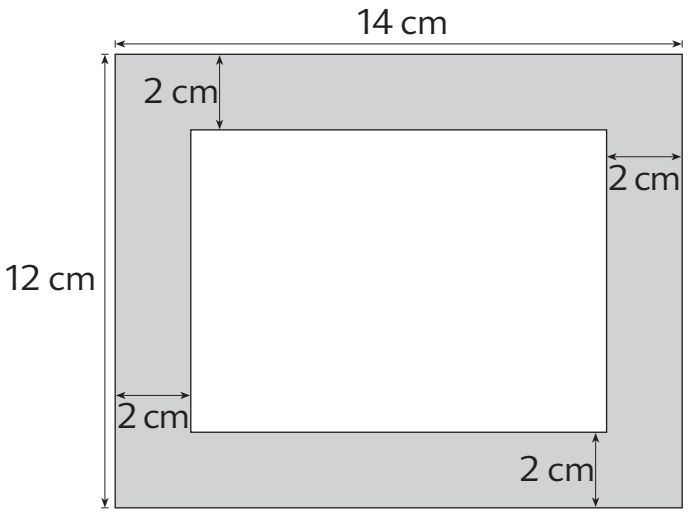
Find the area and perimeter of the figure below.



Area of figure = Area of A + Area of B + Area of C
$= (2 \times 2)\ m^2 + (4 \times 4)\ m^2 + (3 \times 2)\ m^2$
$= 4\ m^2 + 16\ m^2 + 6\ m^2$
$= 26\ m^2$

Perimeter of figure = (6 + 3 + 2 + 1 + 4 + 1 + 2 + 2 + 2 + 1) m
= 24 m

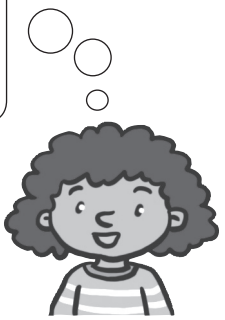
2. Find the area of the shaded part of the figure.



Area of big rectangle $= 14 \text{ cm} \times 12 \text{ cm}$
$= 168 \text{ cm}^2$

Area of small rectangle $= 10 \text{ cm} \times 8 \text{ cm}$
$= 80 \text{ cm}^2$

$14 - 4 = 10$
$12 - 4 = 8$
Length of small rectangle is 10 cm.
Width of small rectangle is 8 cm.



Unit 10 : Bar Graphs and Line Plots

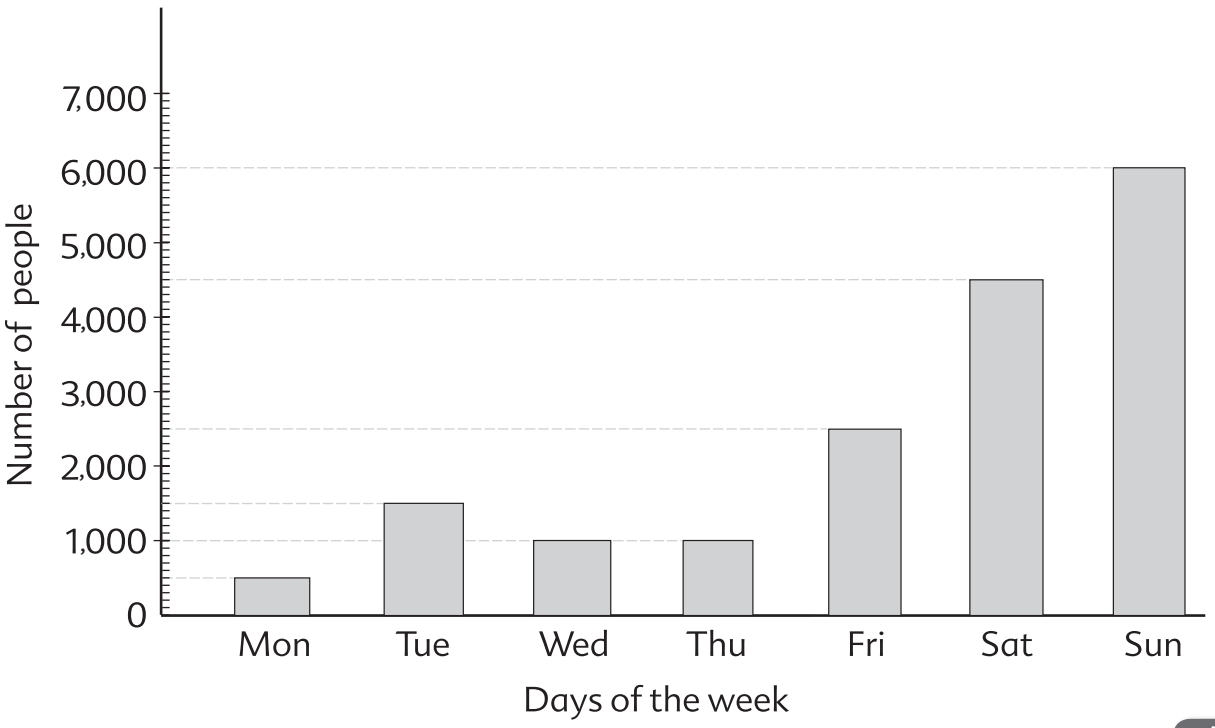
Friendly Notes

Bar Graphs

A **bar graph** makes comparison of data easy.

The table below shows the number of people who went to a concert during a week.

Day	Number of people
Monday	500
Tuesday	1,500
Wednesday	1,000
Thursday	1,000
Friday	2,500
Saturday	4,500
Sunday	6,000



Line Plots

The results of surveys can be organized in different ways to help us analyze the data more easily. For example, we can organize the data from the least value to the largest value or we can use a line plot to present the data.

A survey was conducted to find the number of fruits 20 students eat in a day. The data collected is recorded in the tally chart.

Number of fruits eaten	Tally
0	////
1	~~////~~ /
2	~~////~~ //
3	///

The data is shown on a line plot as follows: