



W.C. 13th July

<https://www.bbc.co.uk/bitesize/tags/zncsscw/year-6-lessons/1>

<https://whiterosemaths.com/homelearning/year-6/>

Maths

Dear parents/carers, there is no expectation to complete all the work or print worksheets off - children can work on paper if they want to write it down. Thanks for all your hard work.

Also there is work on **StudyLadder** that we know the children love to use. You can email us on s83year6@st-annes.solihull.sch.uk for the password if your child has forgotten their login.

Purple Mash Look out for the activities: 3D shapes and 2Race (x tables 1-12).

There is a Fluent in 5 at the start of Monday to Thursday for the children to practise their arithmetic.

We have also uploaded into the home learning section the Corbett Maths 5 a day for the whole of July for each level - Bronze, Silver, Gold, Platinum (as well as the answers) and a weekly arithmetic test with answers.



After watching the videos and having a go at the practice activities, have a go at these activities. Depending on your confidence choose Mild, Medium or Spicy.

Extensions - You may wish to deepen your learning by looking at the Collins Worksheets provided by the BBC too.

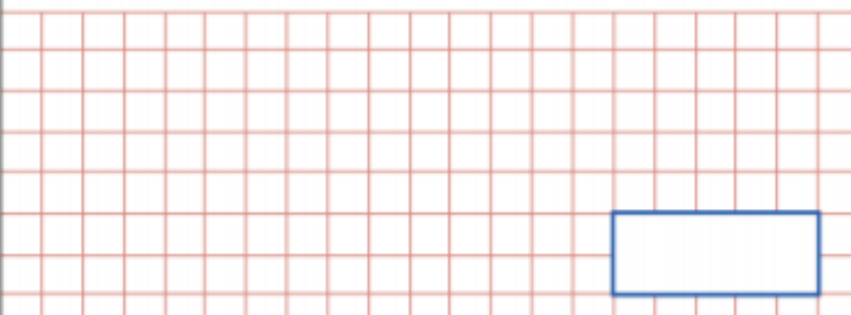
Monday

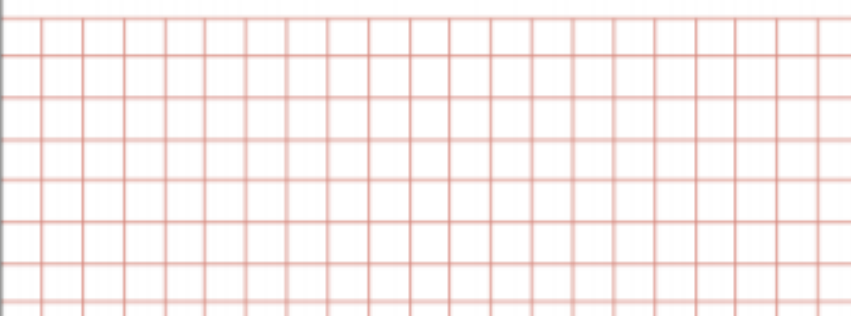
<https://www.bbc.co.uk/bitesize/tags/zncsscw/year-6-lessons/1>

<https://whiterosemaths.com/homelearning/year-6/>

Nets of 3D shapes

Fluent in 5

1	$1.45 \times 3 =$	
		
		 1 mark

2	$7,894 - \div = 3,858$	
		
		 1 mark

3	$\frac{3}{4} \times 12 =$	
		
		 1 mark

4

$$65 \times 23 =$$

☐

2 marks

5

$$6 + 3 \times 8 + 2 =$$

☐

1 mark

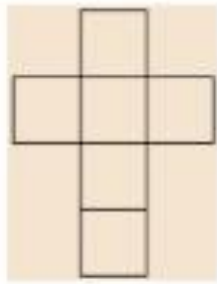
6

$$\frac{3}{5} - \frac{1}{10} =$$

☐

1 mark

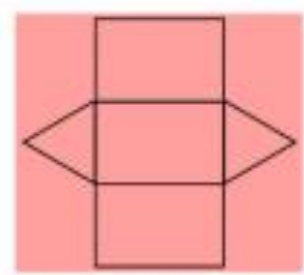
NETS INFORMATION SHEET 1



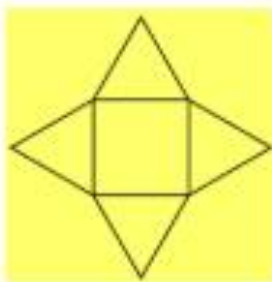
Cube
Faces: 6
Edges: 12
Vertices: 8



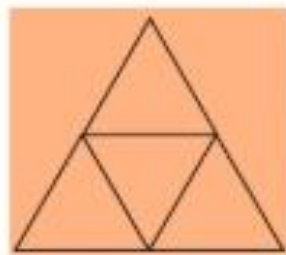
Cuboid
Faces: 6
Edges: 12
Vertices: 8



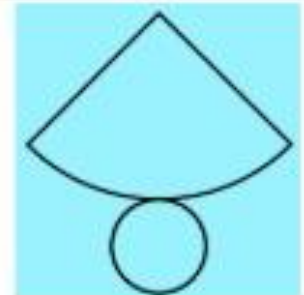
Triangular Prism
Faces: 5
Edges: 9
Vertices: 6



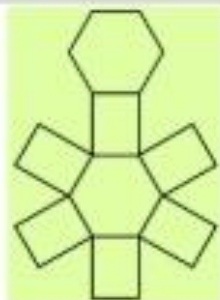
Square-based Pyramid
Faces: 5
Edges: 8
Vertices: 5



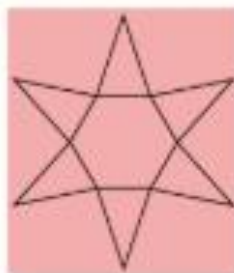
Tetrahedron
(Triangular-based Pyramid)
Faces: 4
Edges: 6
Vertices: 4



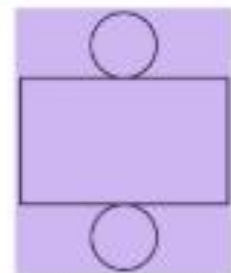
Cone
Faces: 2
Edges: 1
Vertices: 0 or 1



Hexagonal Prism
Faces: 8
Edges: 18
Vertices: 12



Hexagonal Pyramid
Faces: 7
Edges: 12
Vertices: 7



Cylinder
Faces: 3
Edges: 2
Vertices: 0

Mild, Medium and Spicy

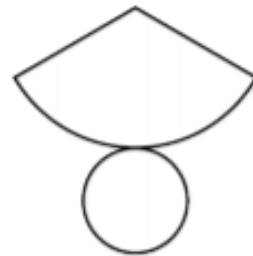
3D Shape Challenge

Can you unscramble the names of the 3D shapes and match them to the correct shape net?

1. iyrneldC



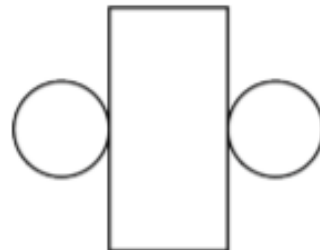
2. bueC



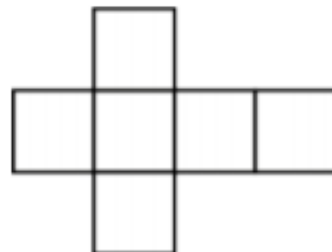
3. boCuid



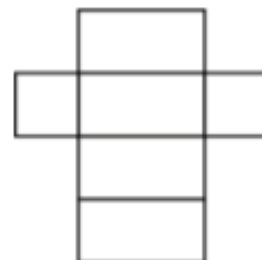
4. enoC



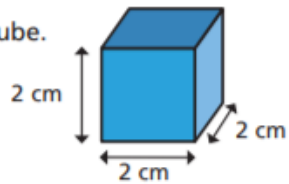
5. ymPrida



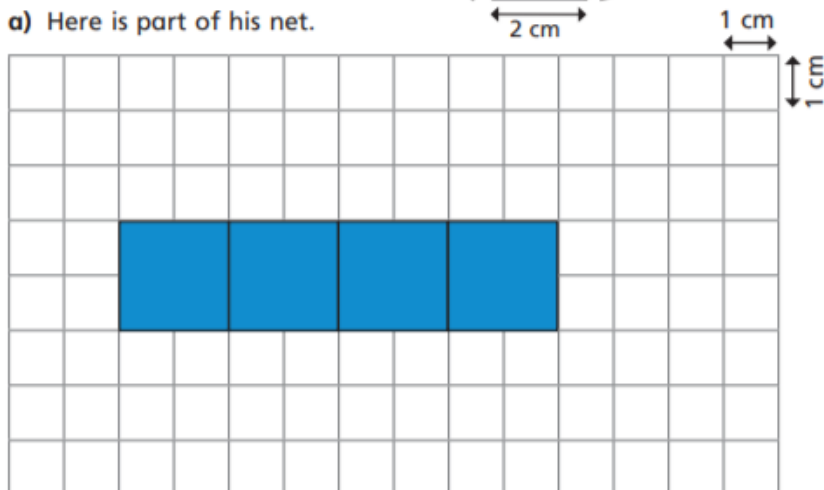
6. siPmr



- 1 Ron is drawing the net of this cube.

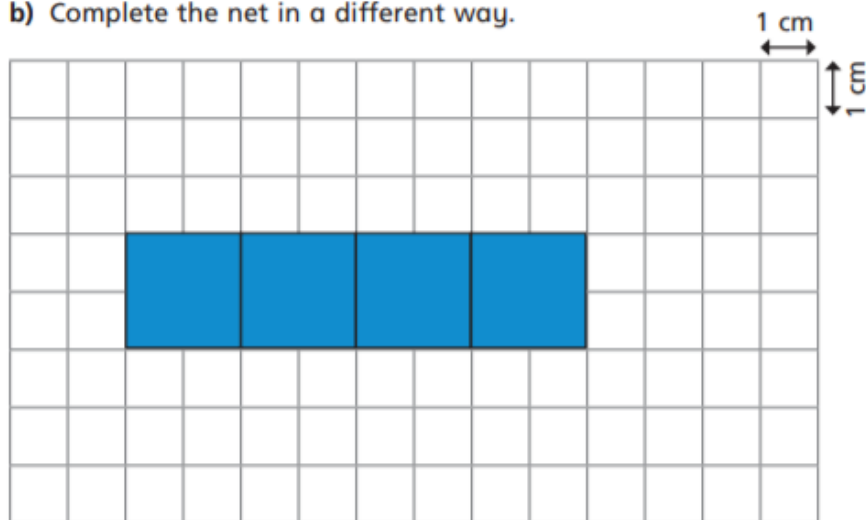


- a) Here is part of his net.



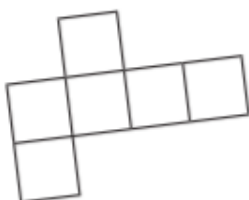
Complete the net.

- b) Complete the net in a different way.

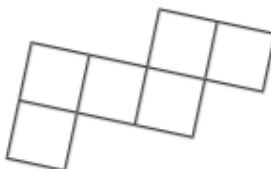


- 2 Tick the nets that will make a cube.

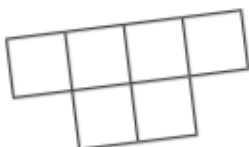
A



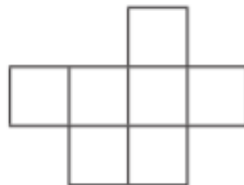
C



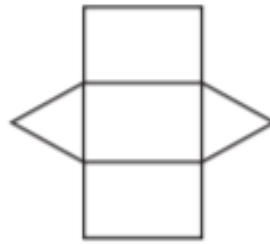
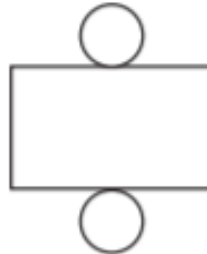
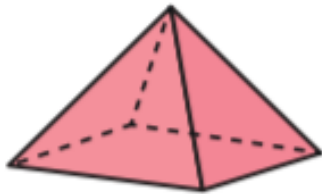
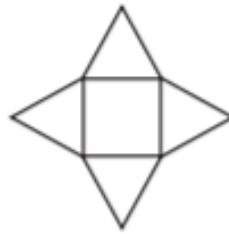
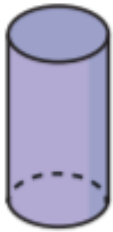
B



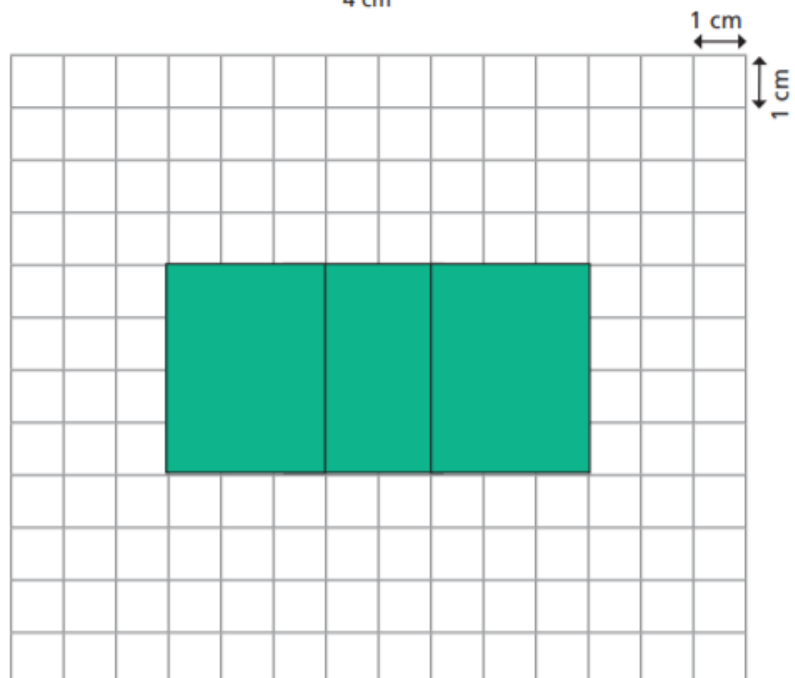
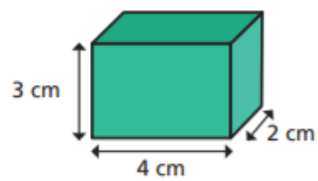
D



Match each net to its 3D shape.



Complete the net of the cuboid.

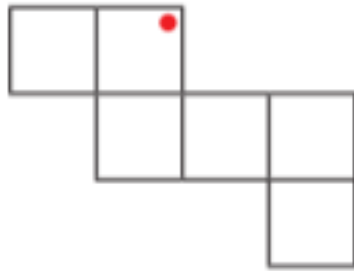


Here is the net of a cube.

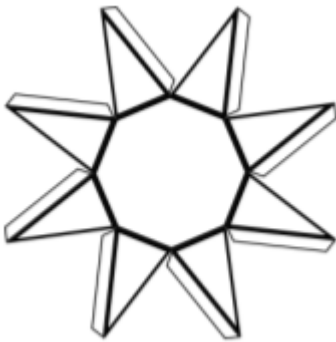
The net is made into a cube.

Which two corners will meet the corner marked with ●?

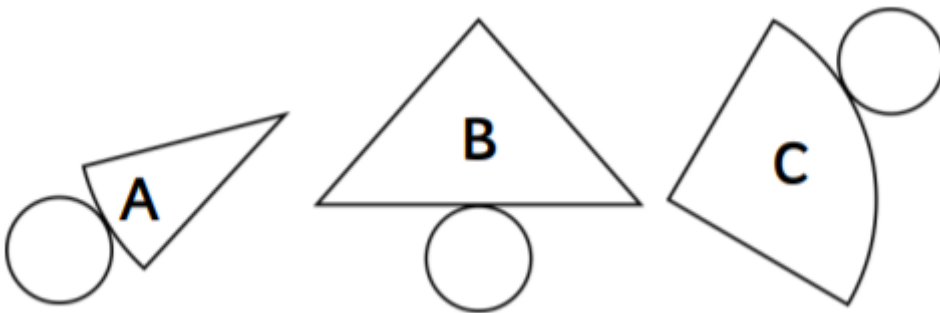
Mark them with a cross.



This net would make an octagonal based pyramid; true or false?



Which of these nets would make a cone? Which would not?



Tuesday

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<https://whiterosemaths.com/homelearning/year-6/>

Illustrate and name parts of circles and understand the relationship between the radius and diameter

Fluent in 5

1	$6 \times 80 =$	
		
		 1 mark

2	$\begin{array}{r} 6218 \\ \times \quad 3 \\ \hline \end{array}$	
		
		 1 mark

3	$19 + 27 =$	
		
		 1 mark

4

$84 \times 3 =$

1 mark

5

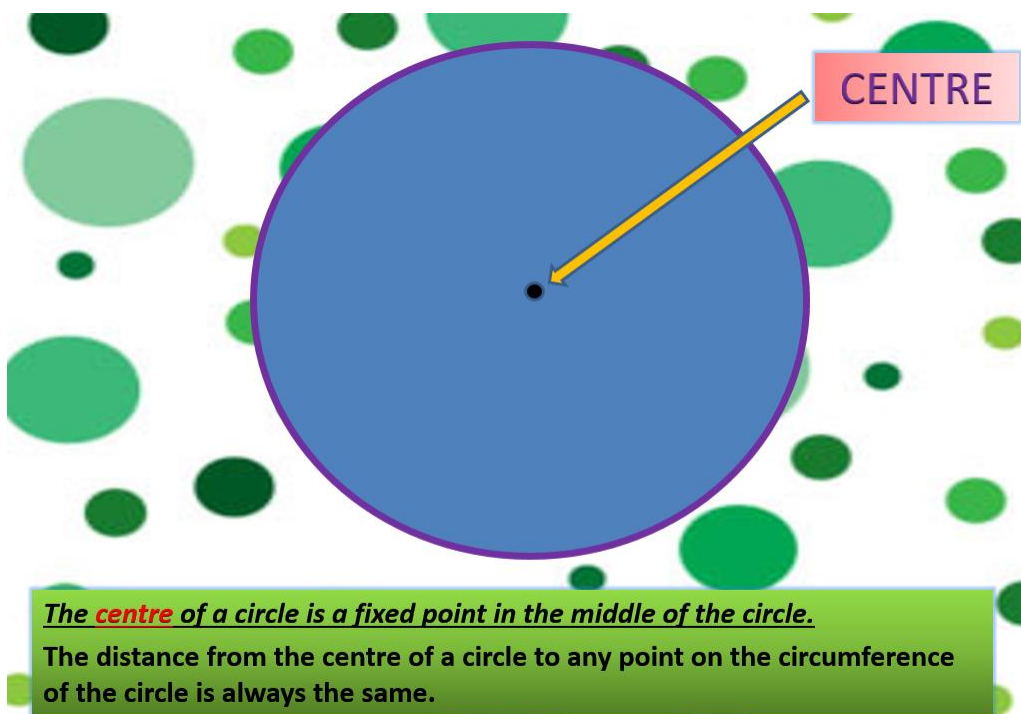
$981 + 34,894 =$

1 mark

6

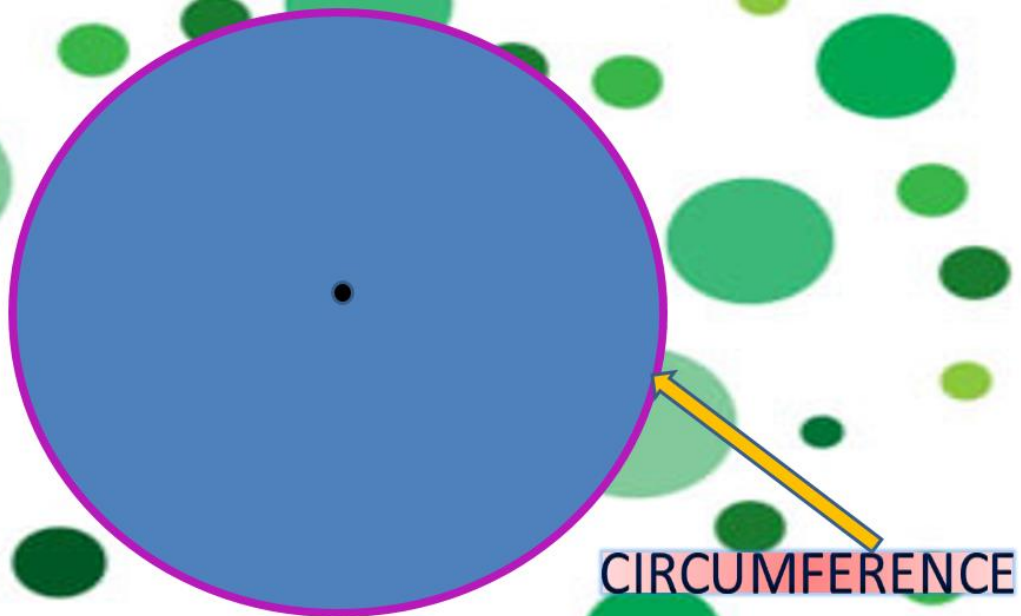
$183 \times 100 =$

1 mark

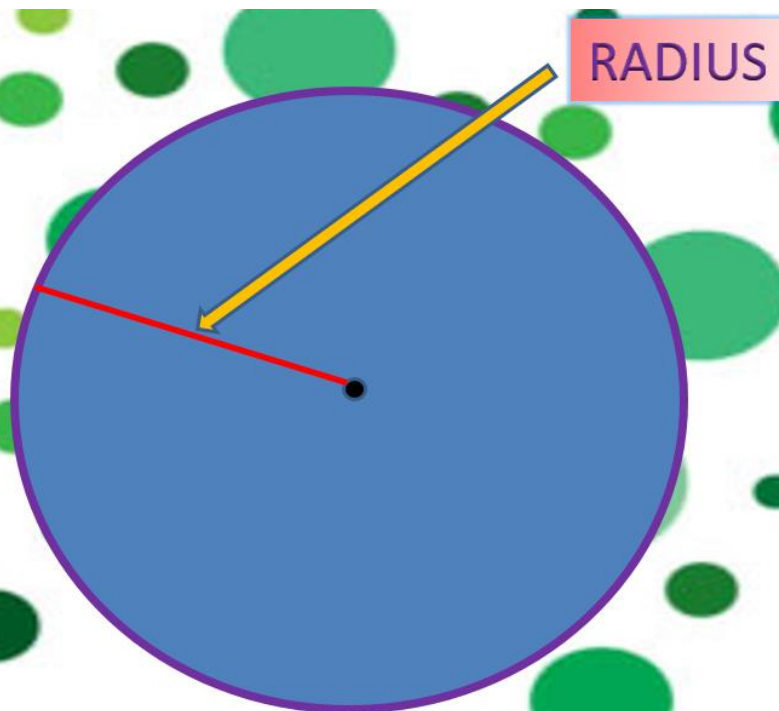


The **centre** of a circle is a fixed point in the middle of the circle.

The distance from the centre of a circle to any point on the circumference of the circle is always the same.

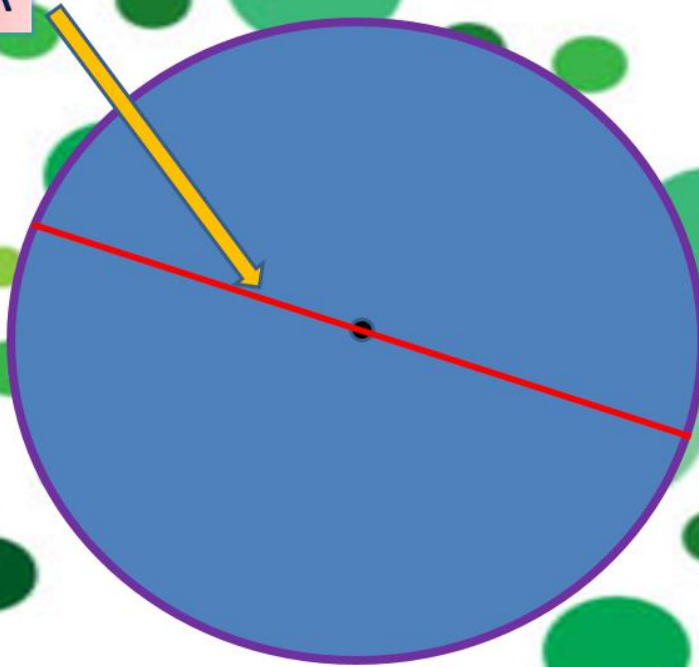


The **circumference** of a circle is the edge or perimeter of the circle.



The **radius** of a circle is a straight line that has one endpoint on the centre of the circle and the other endpoint on the circumference of the circle.

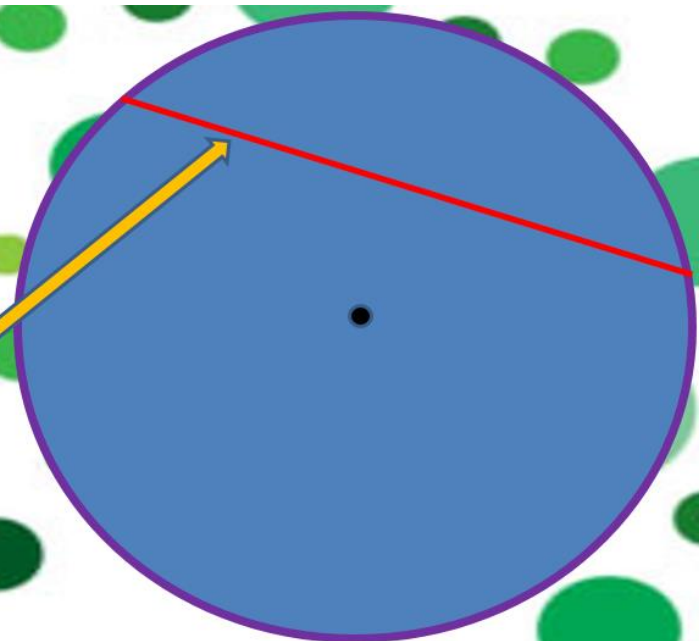
DIAMETER



The **diameter** of a circle is a straight line that passes through the centre of the circle and has both endpoints on the circumference of the circle.

The **diameter** of a circle is twice as long as the radius of the circle.

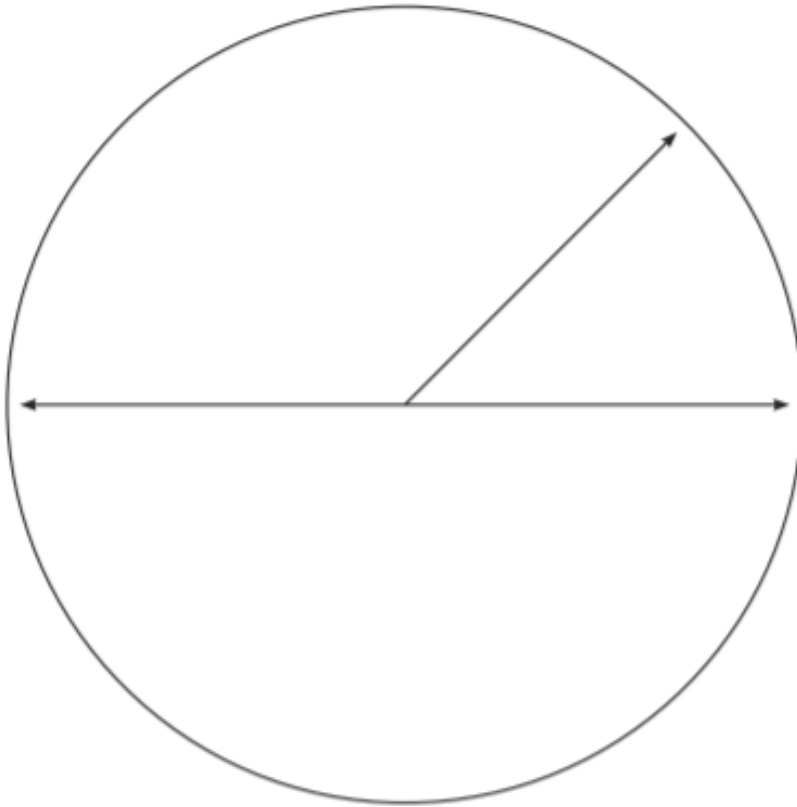
CHORD



The **chord** of a circle is a straight line that has both endpoints on the circumference of the circle.

Mild

Label these parts of a circle, using the terms: circumference, radius and diameter.



Complete the following sentences:

The radius is _____ the length of the diameter.

The diameter is _____ the length of the radius.

Use the radius to find the diameter of each circle.

Radius	Diameter
4m	8m
32cm	
54m	

Use the diameter to find the radius of each circle.

Radius	Diameter
17cm	34cm
	60mm
	48m

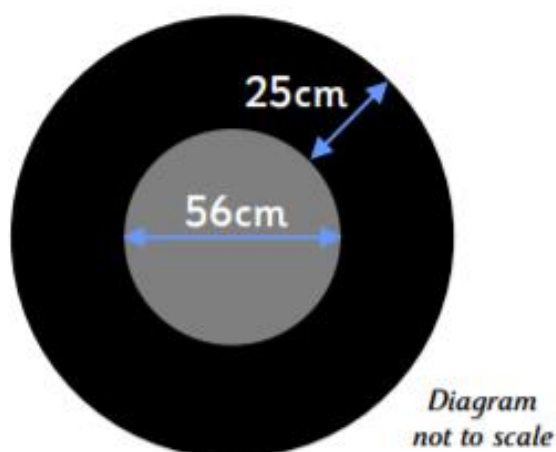
Alex says:



The bigger the radius of a circle, the bigger the diameter.

Do you agree? Explain your reasoning.

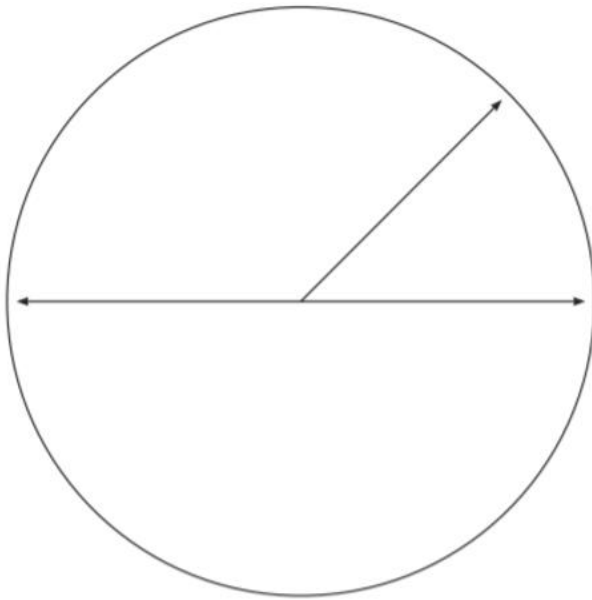
Find the diameter of the wheel.



Describe how you know.

Medium

Label these parts of a circle, using the terms: circumference, radius and diameter.

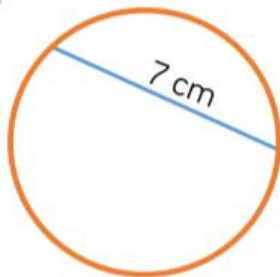


Write about the relationship between the radius and diameter.

Spot the mistake!

Tommy has measured and labelled the diameter of the circle below.

He thinks that the radius of this circle will be 3.5 cm.



Is Tommy right? Explain why.

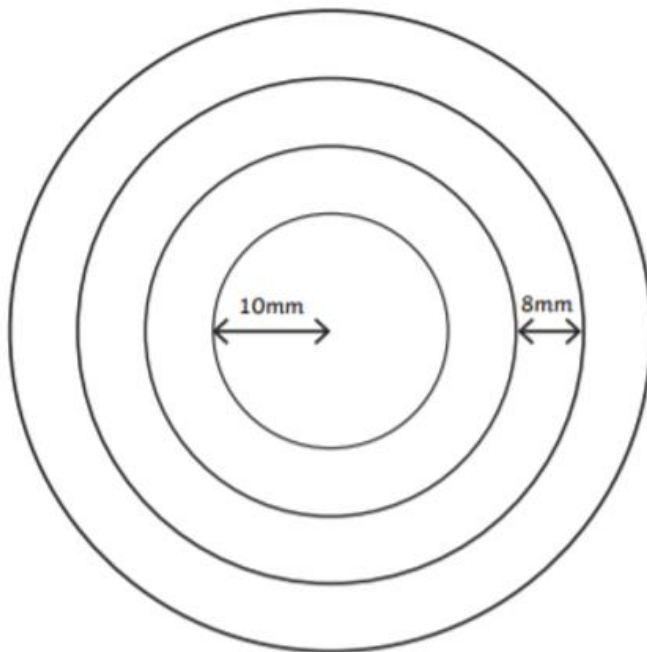
Use the radius to find the diameter of each circle.

Radius	Diameter
75m	
124mm	
96cm	
39m	

Use the diameter to find the radius of each circle.

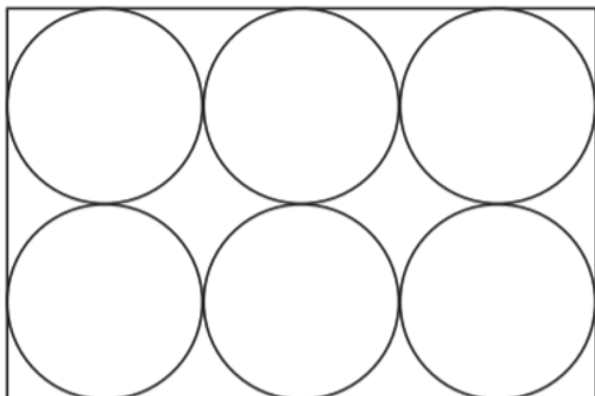
Radius	Diameter
	89m
	103cm
	65mm
	87cm

Calculate the diameter of the largest circle:



Diameter = _____cm

This design is made up of six circles, each with a radius of 14cm, inside a rectangle. Calculate the length and width of the rectangle.



Length = _____cm Width = _____cm

Spicy

- 1) Use the words below to complete the labels to show the parts of a circle.

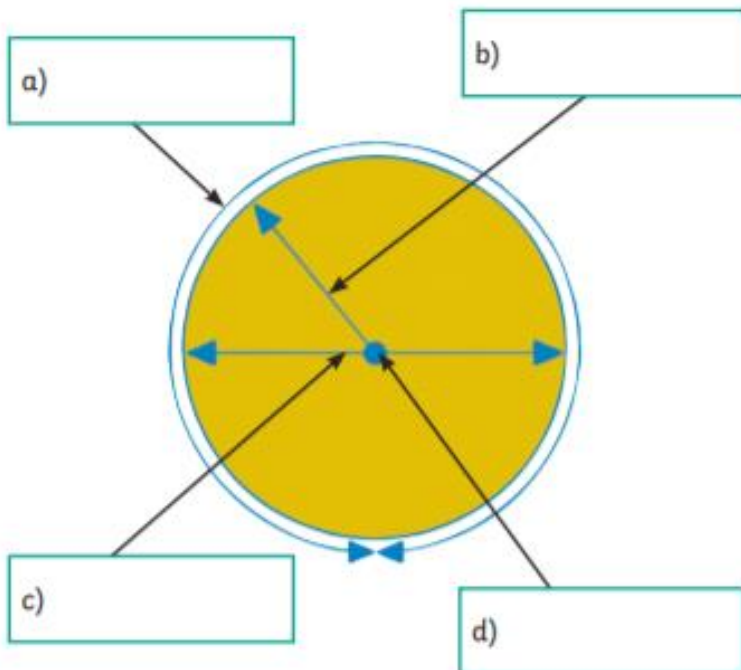


circumference

centre

radius

diameter



1b)

- 1) Jack says this is the diameter of the circle. Kia says this is the radius of the circle.



Who do you agree with?

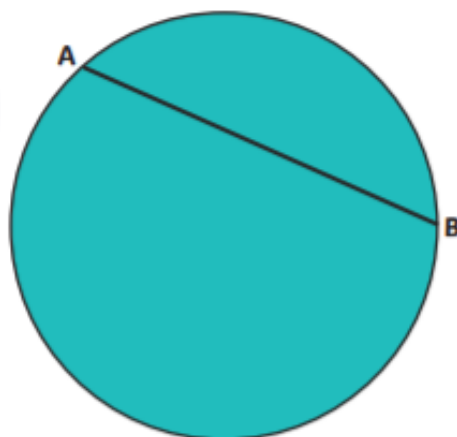
Explain your answer.



Jack



Kia

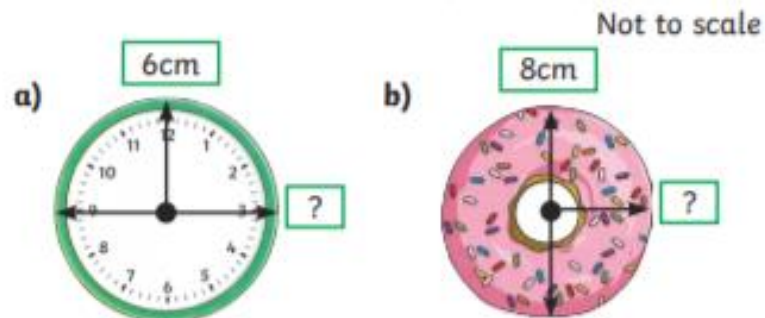


2) Copy and complete these sentences.

The diameter of a circle is _____ the length of the radius.

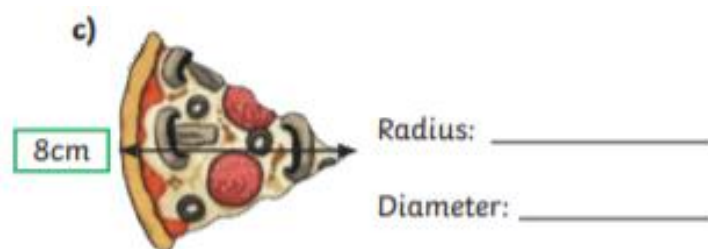
The radius of a circle is _____ the length of the diameter.

3) Find the diameter and radius of these objects.



Radius: _____ Radius: _____

Diameter: _____ Diameter: _____



4) Copy and complete the table.

Radius	Diameter
5.5cm	
	13cm
3.75cm	

Use the radius (r) to find the diameter (D) of each circle.

r	D
236m	
409cm	
42.8m	
425mm	cm
56.2mm	cm

Use the diameter (D) to find the radius (r) of each circle.

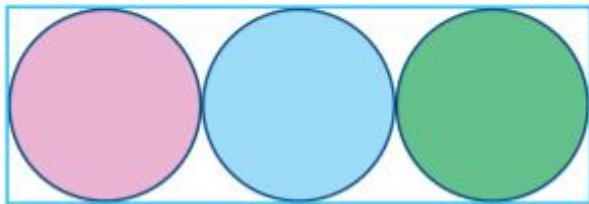
r	D
	569m
	43.8m
	43.06cm
cm	4862mm
cm	831mm

This design is made from a rectangle and three congruent circles.

The length of the rectangle is 15cm.

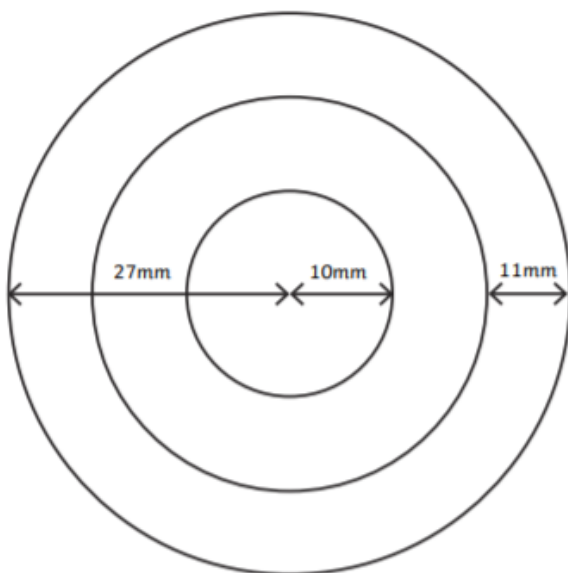
What is the radius of each circle?

Explain your answer.



Not to scale

Calculate the diameter of the second circle:



Diameter = _____cm

Wednesday

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Interpret pie charts and use this to solve problems

Fluent in 5

1	8 5 6 2		 1 mark
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2	$569 \times 8 =$		 1 mark
---	------------------	-------------	-----------------------

3	$654 \div 100 =$		 1 mark
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4

$87 - 29 =$

1 mark

5

$55\% \text{ of } 120 =$

1 mark

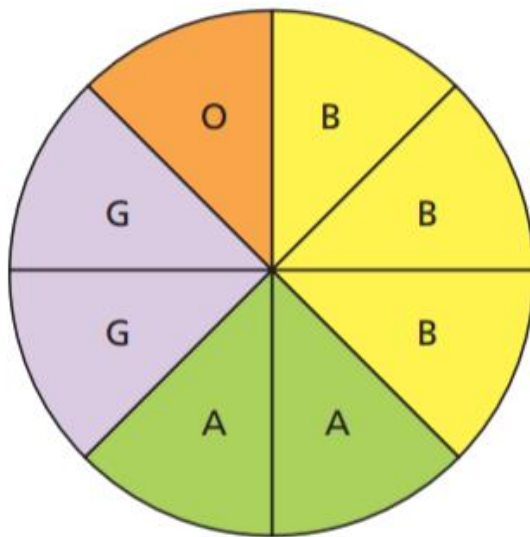
6

$98 + 165 =$

1 mark

Mild

- 1 The pie chart shows the favourite fruit of 48 children.



banana (B)

apple (A)

grapes (G)

orange (O)

a) How many children chose banana?

b) How many children chose apple?

c) What fraction of the children chose orange?

d) What fraction of the children chose grapes?

Seve has forgotten what fraction of the pie chart should be given to 'Book 1'.

Can you work out the fraction from the information below?

<u>Book 1</u>	?
<u>Book 2</u>	6 people
<u>Book 3</u>	3 people
<u>Total</u>	12 people



Phil

I do not need to know how many people were surveyed to know that the same amount of people chose afternoon as chose evening.

Favourite
time of
day



- Morning
- Lunchtime
- Afternoon
- Evening
- Night

Do you agree? Explain your answer.

Medium

A survey asked 1,200 people how many televisions they have in their home.

The results are shown in the pie chart.



a) How many people have two televisions in their home?

b) How many people have more than two televisions in their home?

c) What fraction of the people have fewer than three televisions in their homes?

Give your answer in its simplest form.

Fiona has forgotten what fraction of the pie chart should be given to 'Italian'. Can you work out the fraction from the information below?

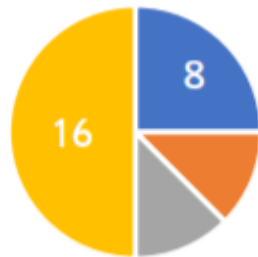
<u>French</u>	10
<u>Spanish</u>	10
<u>Italian</u>	?
<u>German</u>	5
<u>Total</u>	30 people



Rosie

I do not have enough information to work out how many people were surveyed.

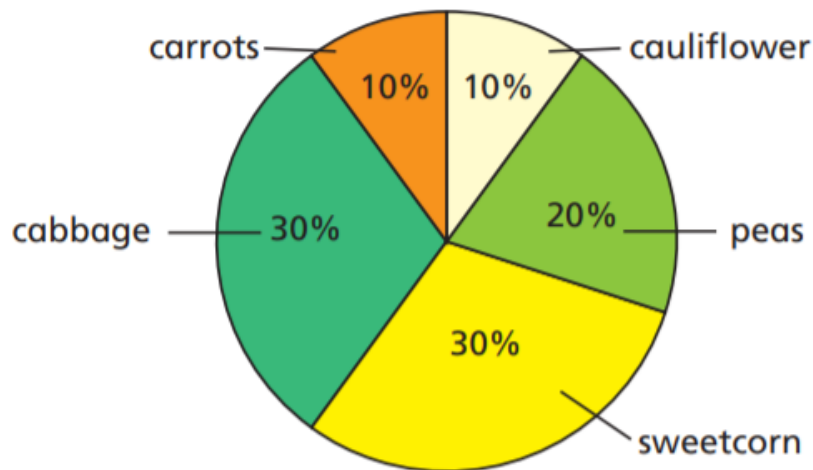
Favourite
school
year



■ Year 3
■ Year 4
■ Year 5
■ Year 6

Do you agree? Explain your answer.

60 children were asked to choose their favourite vegetable from five options.



a) Work out the number of children who chose each vegetable.

carrots

peas

sweetcorn

cabbage

cauliflower

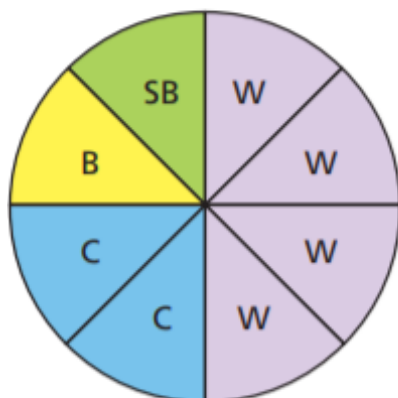
Spicy

Children from two schools were asked how they travel to school.

The results are shown in the pie charts.

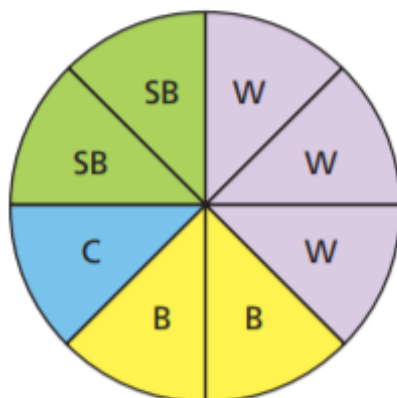
Hockton Primary:

160 children



Turleton Academy:

320 children



car (C)

bike (B)

school bus (SB)

walk (W)

a)



More children from Hockton Primary walk to school because more pieces show 'walk'.

Do you agree with Tommy? _____

Explain your answer.

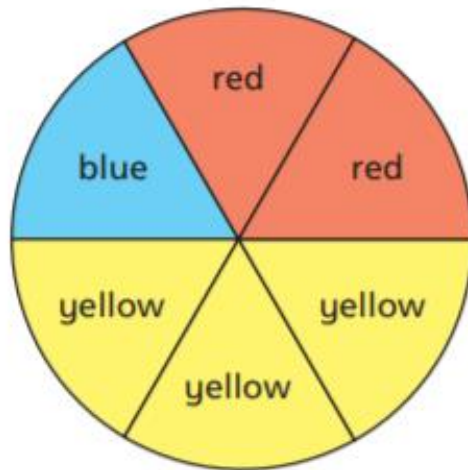
b) How many children from each school travel by car?

Hockton Primary

Turleton Academy

A bag contains red, yellow and blue counters.

The pie chart shows the proportion of counters of each colour.



- a) There are 30 red counters in the bag.

How many counters are in the bag in total?

counters

- b) What is the difference between the number of blue counters and the number of yellow counters?

counters

- c) Complete the sentences.

There are half as many _____ counters

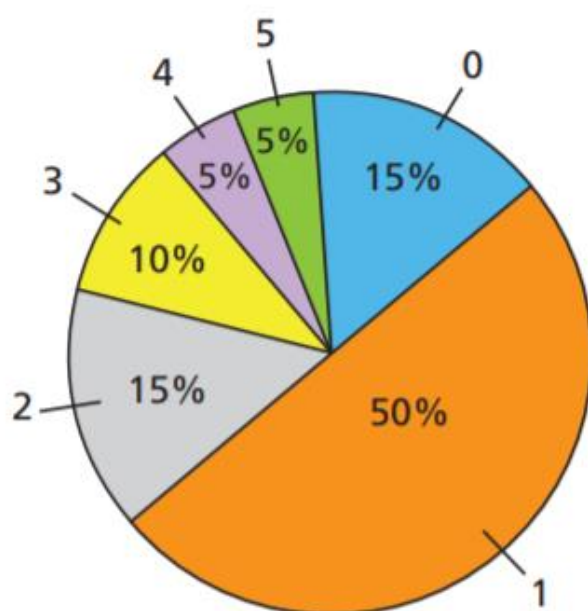
as _____ counters.

There are three times as many _____ counters

as _____ counters.

160 people were asked how many siblings they have.

The results are shown in the pie chart.



Complete the table. Show each step of your workings.

Siblings	Frequency

Thursday

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Solve problems involving calculating the mean as an average

Fluent in 5

1	$675 \div 6 =$	
		
		1 mark

2	$604 - 176 =$	
		
		1 mark

3	$76.439 + 67.842 =$	
		
		1 mark

4

$1.8 \div 0.2 =$

☐

1 mark

5

$654 + 230 =$

☐

1 mark

6

$560 \div 8 =$

☐

1 mark

Mean

**The mean is the average
or norm.**

Add up all of the values
to find a total.

Divide the total by the number of
values you added together.

$$2 + 2 + 5 + 6 + 7 + 8 = 30$$

$$30 \div 6 = 5$$

The mean number is

5



www.twinkl.co.uk

Mild

1 Scott has 2 counters. 

Dani has 7 counters. 

Kim has 3 counters. 

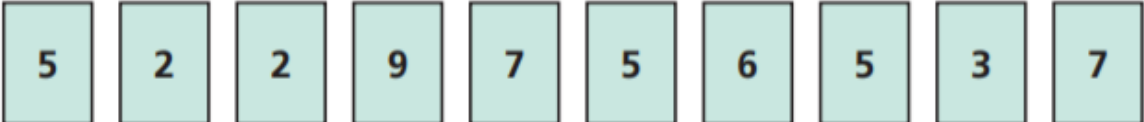
Share the counters evenly in order to find the mean number of counters.

The mean number of counters is

2 Find the mean of each set of numbers.

a) 

b) 

c) 

The mean of these numbers is 5. True or false?



The mean of these numbers is 7. True or false?



Four friends want to share out their sweets equally.

They have 8, 4, 7 and 9 sweets.



What is the mean amount of sweets?

Semaj knows that the mean of his cards is 7. He spilled paint on 1 of his cards.



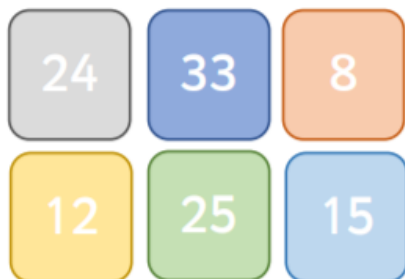
What is the missing number?

Medium

The mean of these numbers is 16. True or false?



The mean of these numbers is 18. True or false?



Six chimpanzees weigh 64kg, 52kg, 54kg, 49kg, 47kg and 43kg.

What is their mean weight?



Ten friends buy some sweets.

They spend 64p, 75p, 29p, 42p, 28p, 51p, 27p, 13p, 10p and 62p.

What is the mean amount they spent?



Huan collects football cards.

The table shows how many he collected over four years.

Year	Number of cards
2016	56
2017	104
2018	81
2019	103

Work out the mean number of cards collected per year.

a) The mean of four numbers is 9

What is the total of the four numbers?

b) Write an example of what the four numbers could be if none of them are 9

Three friends are trying to work out their mean height. Zain is 7cm taller than Marie. Marie is 5cm smaller than Oliver. Oliver is 185cm tall.



What is their mean height?

Spicy

These items of clothing cost £8.46, £4.13, £5.00, £8.99 and £5.42.

What is their mean cost?

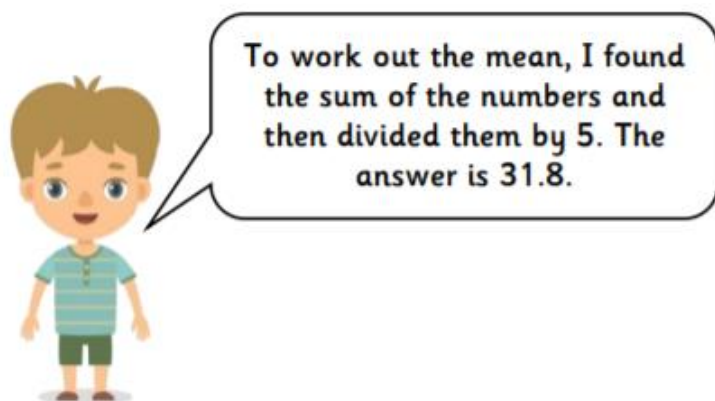


Three friends are trying to work out their mean age. Heath is 6 years younger than Brie. Brie is 3 years older than Beth. Beth is 28.



What is their mean age?

Elton has worked out the mean of five numbers: 15, 63, 51, 24 and 6.



Do you agree with Elton's answer? Why?

The table shows how many pets a number of children have.
One value is missing.

Name	Number of pets
Brett	4
Nijah	0
Rosie	1
Teddy	2
Esther	
Tom	7

The mean number of pets is 3
How many pets does Esther have?

Six numbers are written on cards.
The mean of the numbers is 12
Fill in the two missing numbers if one is double the other.

13		4	16	6	
----	--	---	----	---	--

A basketball team played four games.
The mean number of points was 45

a) How many points did they score in total in the four games?

b) After the fifth game, the mean increased to 50
How many points did they score in the fifth game?

For each set of numbers calculate the value of the missing number using the given mean.

1.	14		5	11	with a mean of 12	
2.	2	20	7		with a mean of 12.25	
3.	5		5	6	7	with a mean of 6
4.	4	6	1		1	with a mean of 2.8
5.	1	17		21	6	with a mean of 11.4

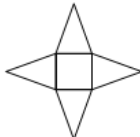
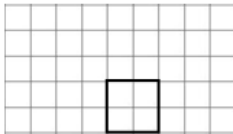
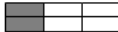
Friday

<https://www.bbc.co.uk/bitesize/tags/zncsscw/year-6-lessons/1>

Challenge of the Week

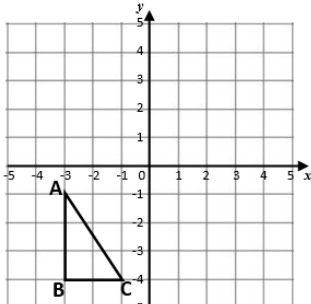
Key Skills

Mild

A: Place Value, Add and Subtract		B: Multiply, Divide and Fractions		C: Measure, Geometry and Statistics													
1. Write < or > to make this correct: 384,495 495,837	5:1	11. Circle all the factors of 36. 2 3 5 12 15	5:8	21. One glass holds 750 millilitres of lemonade. How much lemonade can 4 glasses hold? Give your answer in litres .	5:23												
2. Write 520,102 in words.	5:1	12. How many factors does a prime number have?	5:9	22. What shape is this a net of? 	5:24												
3. Round 247,599 to the nearest ten .	5:2	13. $3,384 \times 11$	5:10														
4. What is the missing number? 1,837 1,847 1,867	5:2	14. $29,350 \div 1000$	5:11	23. Translate the shape: 3 units left and 2 units up. 	5:28												
5. The temperature was -9°C then increased by 17°C. What is it now?	5:3	15. Circle all of the square numbers . 2 9 12 16 20	5:12														
6. What number is represented by these Roman Numerals? CML	5:4	16. $\frac{7}{15} - \frac{2}{5} =$	5:13	24. Look at this bus timetable: <table border="1" data-bbox="1040 1075 1378 1167"><tr><td>Newfield</td><td>9:05</td><td>9:35</td><td>10:05</td></tr><tr><td>Swanby</td><td>9:31</td><td>10:01</td><td>10:31</td></tr><tr><td>Oldtown</td><td>9:45</td><td>10:15</td><td>10:45</td></tr></table> What time does the 9:35 bus from Newfield stop at Oldtown? 25. I get to the bus stop in Swanby at 10:05. How long do I have to wait until the next bus?	Newfield	9:05	9:35	10:05	Swanby	9:31	10:01	10:31	Oldtown	9:45	10:15	10:45	5:30
Newfield	9:05	9:35	10:05														
Swanby	9:31	10:01	10:31														
Oldtown	9:45	10:15	10:45														
7. $28,629 + 13,535 =$	5:5	17. Find an equivalent fraction of $\frac{1}{3}$. 	5:14														
8. $110,250 - 12,890 =$	5:5	18. Write $\frac{14}{4}$ as a mixed number .	5:15														
9. Complete this sum without written working. $20,600 + 5,400 =$	5:6	19. $2\frac{1}{3} \times 6 =$	5:16														
10. DVDs are £11.35 each. If I buy 2, how much change do I get from £30?	5:7	20. Round 9.54 to 1 decimal place.	5:17														
Total (A)		Total (B)		Total (C)													
Test Total (A+B+C)		R (0-9)	Y (10-19)	G (20-25)													

Key Skills

Medium and Spicy

A: Place Value, Add, Subtract, Multiply and Divide		B: Fractions, Ratio, Proportion and Algebra		C: Measure, Position and Direction	
1. Write in words: 2,034,601	6:1	11. Simplify this fraction fully: $\frac{18}{54}$	6:7	21. 400ml of water are poured out of a 2.25 litre bottle. How much is left?	6:18/19
2. What is the value of the 3 in this number? 1,384,721	6:1	12. $1\frac{2}{3} - \frac{3}{4} =$	6:8	22. How many hours are there in three days?	6:19
3. Round 7.186 to the nearest whole number.	6:1	13. $\frac{1}{3} \div 3 =$	6:9	23. These rectangles have the same area . Find the missing side length.	6:20
4. The temperature drops from 1°C to -11°C. What is the difference?	6:2	14. What is the value of the 8 in this number: 25.738	6:10		6:27
5. $2,140 \times 32$	6:3	15. Give your answer as a decimal: $26 \div 8$	6:11	24. What are the co-ordinates of A ?	
6. $7,242 \div 17$	6:3	16. Write this fraction as a decimal and a percentage . $\left(\frac{1}{2}\right)$	6:12		
7. 15 and 27 only have two common factors . What are they?	6:4	17. Find 75% of 520.	6:13		
8. The number 30 has three prime factors . What are they?	6:4	18. The ratio of cats to dogs 3:2. If there are 15 cats, how many dogs?	6:14		
9. $(25 + 13) \div 2$	6:5	19. I have m pence. I spend 17p. Write an expression for this.	6:15		
10. How many 52-seater buses does a school need for 198 pupils and staff?	6:6	20. Write a possible value for a and b . $2 \times a + b = 17$	6:17	25. Translate triangle ABC 5 units right and 2 units up.	6:28
Total (A)		Total (B)		Total (C)	
Test Total (A+B+C)		R (0-9)	Y (10-19)	G (20-25)	