

Meet the department...

In the Maths department we have 10 Maths Teachers.
Throughout this booklet you will find out about some of our favourite
Maths related things. Come back to this page to fill them in, can you
find them all?

Favourite Number:

Favourite
Mathematician:

MRS THOMPSON

MRS BILLINGS

Favourite Number:

Favourite
Mathematician:

MRS EBOHON

Favourite Number:

Favourite
Mathematician:

Favourite Number:

Favourite
Mathematician:

MS HACKSHAW

**MRS
MASCARENHAS**

Favourite Number:

Favourite
Mathematician:

Favourite Number:

Favourite
Mathematician:

MRS MCJANNET

MRS MONDO

Favourite Number:

Favourite
Mathematician:

Favourite Number:

Favourite
Mathematician:

MRS PATEL

Favourite Number:

Favourite
Mathematician:

MS RAGHOO

MISS TONKS

Favourite Number:

Favourite
Mathematician:

Mrs Billings's
favourite
number is π .

Ms Raghoo's
favourite
number is $\sqrt{9}$

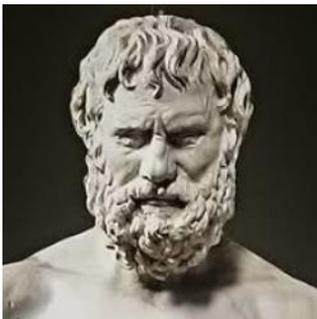
Secondary Ready

At Oasis Academy Coulsdon all of our students use the excellent online learning tool **Hegarty Maths**. When you join us in September, we will set up your Hegarty Maths account and teach you how to use it.



We are delighted that the team behind Hegarty Maths have recently launched a free online programme called 'Secondary Ready' that you can access at home this summer.

Simply register at numerise.com/secondary-ready and complete the course. It's only twelve lessons and if you complete them all, you will be super ready for your Year 7 maths lessons. Let us know if you finish it – we can't wait to hear how you get on.



Mrs McJannet's favourite Mathematician is Archimedes who was not only a mathematician but also a physicist, astronomer, engineer and inventor. Archimedes used the method of exhaustion to calculate the value of pi by using circles and polygons.

Can you find out why Archimedes shouted 'Eureka' while in the bath?

The 24 game...

Try this with your family – who is the quickest?

One of our favourite things to do on transition is to play the 24 game. The aim of the game is to be the first person to make the number 24.

For each game you have 4 numbers, you have to use **ALL** four numbers, you can add, subtract, multiply or divide these to make 24.

Example:



2 2 6 8

To make 24, I can do $(8 - 2) \times (6 - 2)$

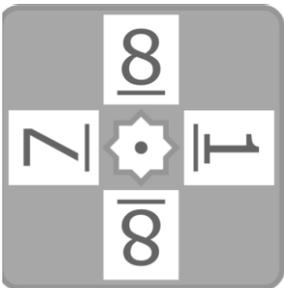
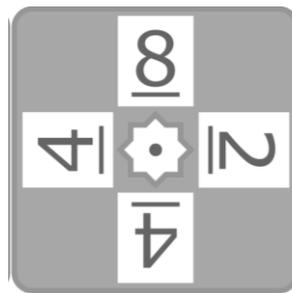
$$8 - 2 = 6$$

$$6 - 2 = 4$$

$$6 \times 4 = 24$$

ONE DOT - EASIEST

Now it's your turn, the 24 cards are below they get harder as you go



Miss Tonk's favourite number is the difference between 7 and 4

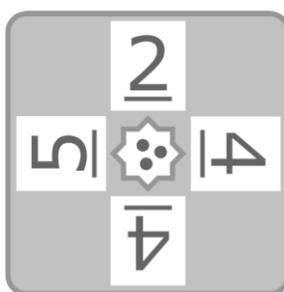
The 24 game...

Mrs McJannet's favourite number is the 4th prime number

TWO DOT - MEDIUM



THREE DOT - HARDER



Mrs Ebohon's
favourite
number is
 $3^2 - \sqrt{4}$

Key Skills...

When you get to a page like this, spend 10 minutes completing the skills check questions based on topics from Y6.

Question 1 Write in figures : thirteen thousand, five hundred and two units	Question 2 Write in figures : seventy seven thousand, eight tens and three units	Question 3 List the factors of 51	Question 4 List the factors of 36
Question 5 Work out $7 \times 10 =$	Question 6 Work out $10 \times 10 =$	Question 7 Simplify $\frac{8}{16}$	Question 8 Simplify $\frac{12}{42}$
Question 9 Find 50% of £180	Question 10 Find 25% of £120	Question 11 Round 2084 to the nearest 100	Question 12 Round 3372 to the nearest 10
Question 13 Work out $86 \times 8 =$	Question 14 Work out $630 \times 9 =$	Question 15 Simplify $5c + 5c + 6c$	Question 16 Simplify $10a + 2b + 8a + 7b$
Question 17 Work out $39253 + 15736 =$	Question 18 Work out $30730 + 18364 =$	Question 19 Work out $8 \times 2 - 5$	Question 20 Work out $6 + 11 \times 3$

SKILLS CHECK

Score

www.mathsbox.org.uk



Ms Raghoo's favourite Mathematician is Fibonacci who was an Italian man who studied math and theories back in the 11th century. He discovered a pattern called the Fibonacci sequence. It's a series of numbers that starts with 0 and 1, and each number after is found by adding the two previous numbers (0, 1, 1, 2, 3, 5...)The sequence just keeps going on and on.

Can you find the first 10 numbers in the sequence?

Maths Keywords...

Y R Y A P F F T Z P M M D Q U M Z L N U
F I J X F U D M E E B U D O N D I M X E
B D P J B K C D B R U F I H I B Y V W J
C K H U T U G Z I I Z M D L T V F S F S
Y P I Z P L N M G M I Q A W S Y V D R Q
H X A T M Y K O P E L S Q W R E P E W K
C O D K Q I A Q D T C T E E S M H R U T
P L A C E V A L U E G Q B T D Z D D M J
J V B S H U K I N R S M D D A T M N K N
Z T R K F S L D L P U C M M N M O U G M
W O O Z D A I P C N R Q E X Z P I H J M
E M N T M N V Y E C C C Q N A R J T Q N
U K E I G T V R C F R N B H D Q H Z S X
P N C X A U A L G N S L B W V I D I D E
S E T F O U K L W Q C T I R Q N N P N E
D Z J D Q P T C A R T B U S O R K G B F
F V N S N I T G B P K G L R W U D J R V
O F V S G P O L Y G O N Q I X R N R O L
O U J V F K T B N Q V Z U D U V A D K O
E L E F T K D W E F Y A C L J T J N R L

Miss Hackshaw's favourite number is the smallest prime number greater than 20.

ADD
ASCENDING
DECIMAL
DESCENDING
ESTIMATE
HUNDREDS
PERIMETER

PLACEVALUE
POLYGON
ROUND
SQUARENUMBER
SUBTRACT
TENS
UNITS



Mrs Patel's favourite mathematician
Leonhard **Euler** (pronounced Oiler) (April 15, 1707 – September 7, 1783) was a Swiss mathematician and physicist. He spent most of his life in Russia and Germany. **Euler** made important discoveries in fields like calculus and topology. He also made many of the words used in maths today.

Key Skills

Mrs Mascarenhas's
favourite number is
 $2^3 \times 3$

When you get to a page like this, spend 10 minutes completing the skills check questions based on topics from Y6.

Name :

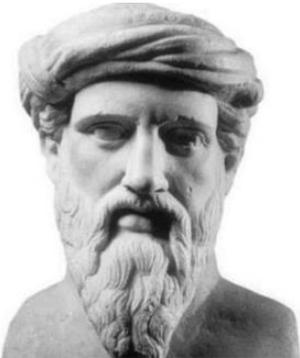
61.2

Question 1 Write in figures : six thousand, four tens and six units	Question 2 Write in figures : One hundred and twenty six thousand, nine tens and three units	Question 3 List the factors of 30	Question 4 List the factors of 20
Question 5 Work out $306 \times 1000 =$	Question 6 Work out $34 \times 1000 =$	Question 7 Simplify $\frac{20}{70}$	Question 8 Simplify $\frac{18}{63}$
Question 9 Find 75% of £720	Question 10 Find 75% of £500	Question 11 Round 6199 to the nearest 100	Question 12 Round 2096 to the nearest 1000
Question 13 Work out $77 \times 9 =$	Question 14 Work out $397 \times 6 =$	Question 15 Simplify $9x + 4x - 3x$	Question 16 Simplify $10a + 3b + 7a + 6b$
Question 17 Work out $37959 + 32050 =$	Question 18 Work out $24509 + 19451 =$	Question 19 Work out $5 \times 2 + 2$	Question 20 Work out $5 \times 4 + 3$

SKILLS CHECK

Score

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Mrs Thompson's
and Miss Tonk's
favourite
mathematician

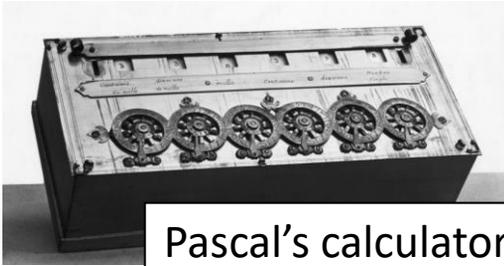
Pythagoras of Samos was a famous Greek mathematician and philosopher (c. 570 – c. 495 BC). He is known best for the proof of the important [Pythagorean theorem](#), which is about right angled triangles. He started a group of mathematicians, called the Pythagoreans, who worshiped numbers and lived like monks.

Can you find out what the Pythagorean theorem is? You will use it in Year 9.

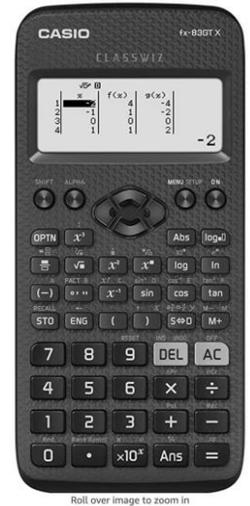


The calculator transformation..

Blaise Pascal, in his short 39 years of life, made many contributions and inventions in several fields. He is well known in both the mathematics and physics fields. In mathematics, he is known for contributing Pascal's triangle and probability theory. He also invented an early digital calculator and a roulette machine.



Pascal's calculator

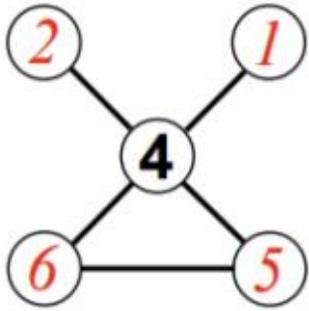


The modern calculator can now be found everywhere, both mini and large versions and is embedded into devices such as laptops and mobile phones. How many devices that have calculators can you find in your house?

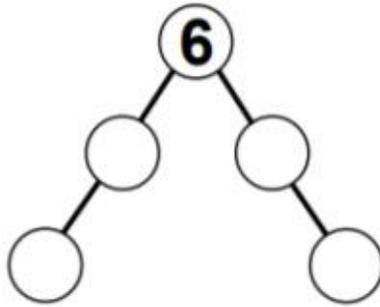
Miss Hackshaw's favourite mathematician

Totelines

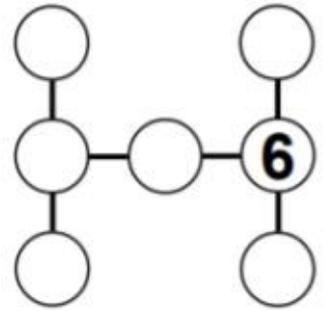
Numbers have to be placed in the empty circles. The numbers to be used are listed under each diagram and no given number may be used twice. The object is to place the numbers so that all those which lie along a straight line, as shown by the lines drawn, add up to the total which is also given under the diagram. The first one has been done for you.



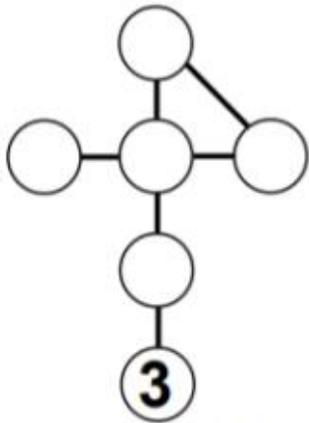
Use 1, 2, 5, 6
Total 11



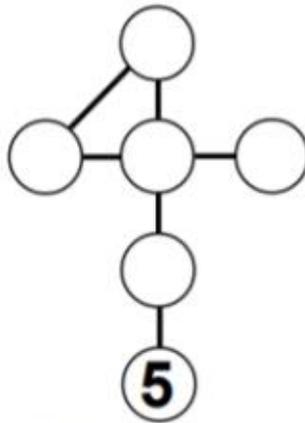
Use 2, 3, 4, 5
Total 13



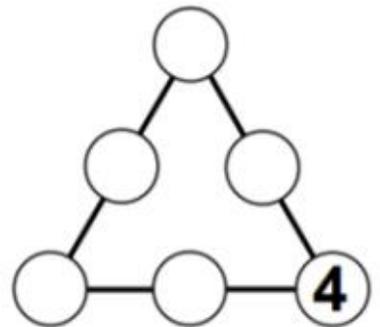
Use 0, 1, 2, 3, 4, 5
Total 10



Use 1, 2, 4, 5, 6
Total 11



Use 0, 1, 3, 4, 6
Total 10



Use 0, 1, 2, 3, 5
Total 9



Katherine Johnson

Katherine Johnson was an American mathematician who calculated and analysed the flight paths of many spacecraft with the US space program. Johnson was known as a 'calculator' at NASA and helped to send astronauts to the moon while overcoming the constraints of segregation.

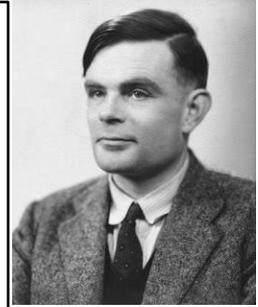
Mrs Ebohon's and
Mrs Mondo's
favourite
mathematician

Code Breaking...

Mrs Thompson's favourite number is $\sqrt{100}$

Alan Turing

Alan Turing was a British mathematician. He made major contributions to the fields of mathematics, computer science, and artificial intelligence. He worked for the British government during World War II, when he succeeded in breaking the secret code Germany used to communicate.



In September 1939 Great Britain went to war against Germany. During the war, Turing worked at the Government Code and Cypher School at Bletchley Park. Turing and others designed a code-breaking machine known as the Bombe. They used the Bombe to learn German military secrets. By early 1942 the code breakers at Bletchley Park were decoding about 39,000 messages a month. At the end of the war, Turing was made an Officer of the Most Excellent Order of the British Empire.

Can you crack the code to reveal who's favourite mathematician is Alan Turing?

A	B	C	D	E	F	G	H	I	J	K	L	M
55	47	84	10	9	75	59	64	32	15	23	50	26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
80	63	19	3	27	30	21	92	18	35	99	69	199

$14 + 12 =$	
$9 \times 3 =$	
$13 + 17 =$	

$50 - 3 =$	
$26 + 6 =$	
$25 \times 2 =$	
$100 \div 2 =$	
$4 \times 8 =$	
$8 \times 10 =$	
$7^2 + 10 =$	
$60 \div 2 =$	

Can you make up some calculations to spell out your name using the same code breaker grid?

Can you make up your own message for a friend to decode?

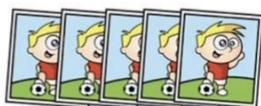
Maths Challenge

Mrs Mondo's favourite number is $7^2 - 2$

Can you solve all the Maths challenges?
They get more difficult as you get them..

Stickers come in packs of 5.

Max buys 12 packs.



He gave his three friends some stickers.

They each receive the same number.

He has 27 stickers left.

How many stickers did Max give each of his friends?

Here are 3 containers.



- The jug can hold **1500 ml**.
- The bucket can hold **2 litres**.
- The barrel can hold **15 litres**.

Anisa wants to fill the barrel with water.

Find 2 ways that Anisa can fill the barrel using the jug and bucket.

Here is a 3 x 3 grid with some shapes in.

			108
			102
			95

Each shape represents a number.

The sum of each row is shown at the right of the table.

Find the value of each of the shapes.

Key Skills...

When you get to a page like this, spend 10 minutes completing the skills check questions based on topics from Y6.

Name :

61.5

Question 1 Write in figures : nineteen thousand, eight hundred and three units	Question 2 Write in figures : six thousand, eight tens and eight units	Question 3 List the factors of 99	Question 4 List the factors of 28
Question 5 Work out $96 \times 10 =$	Question 6 Work out $31 \times 100 =$	Question 7 Simplify $\frac{6}{33}$	Question 8 Simplify $\frac{6}{42}$
Question 9 Find 50% of £880	Question 10 Find 50% of £360	Question 11 Round 3291 to the nearest 10	Question 12 Round 1928 to the nearest 100
Question 13 Work out $86 \times 6 =$	Question 14 Work out $171 \times 2 =$	Question 15 Simplify $7y - 4y - 5y$	Question 16 Simplify $8a + 4b + 5a + 3b$
Question 17 Work out $12389 + 9125 =$	Question 18 Work out $29494 + 3633 =$	Question 19 Work out $34 - 3 \times 4$	Question 20 Work out $21 - 5 \times 2$

SKILLS CHECK

Score

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Mrs
Mascarenhas's
favourite
mathematician

Carl Friedrich Gauss

Gauss is generally regarded as one of the greatest mathematicians of all time for his contributions to number, geometry and probability. Gauss's mother was illiterate and never recorded the date of his birth. As an adult, Gauss used his mathematical ability to work out his birthday using the very little information he was given.

Maths Challenge

Mrs Patel's favourite number is 5^2-2

Can you solve all the Maths challenges?
They get more difficult as you get them..

Connor has five times as much money as Jayden.

Connor gives some money to Jayden.

They now have £8.52 each.

How much did Connor have at the start?

80 people take part in a race.

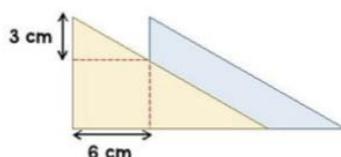
- The ratio of children to adults in the race is **2:3**.
- The mean time for the adults is **2 minutes 15 seconds**.
- The mean time for all 80 people is **3 minutes**.

Find the mean time for the children.

Here are two triangles identical in size.



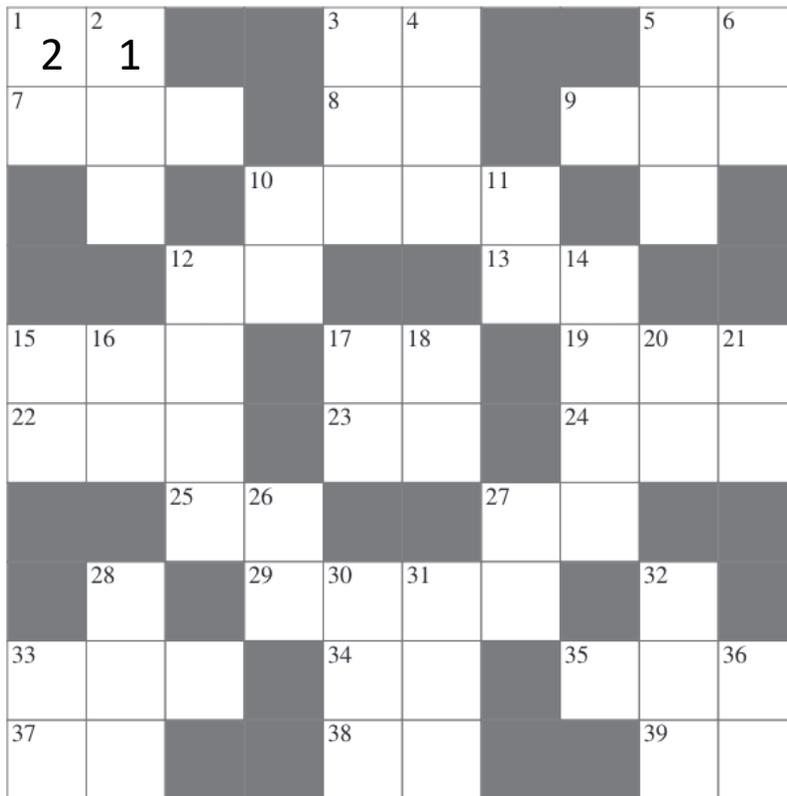
The two triangles are overlapped.



What is the area of the blue triangle showing?

Cross Number...

USE THE QUESTIONS BELOW TO COMPLETE THE CROSS NUMBER.



ACROSS

1. The number of spots on a standard dice (2)
3. The largest two-digit multiple of 13 (2)
5. One more than 8 ACROSS (2)
7. One quarter of the square of 6 DOWN (3)
8. $2 \times 2 \times 2 \times 2 \times 2$ (2)
9. A cube number (3)
10. $15 \text{ ACROSS} + 3 \text{ DOWN} + 6 \text{ DOWN} + 21 \text{ DOWN} + 36 \text{ DOWN}$ (4)
12. $39 \text{ ACROSS} - 33 \text{ DOWN}$ (2)
13. Twice (1 ACROSS + 1 DOWN) (2)
15. $1 \text{ DOWN} \times 38 \text{ ACROSS}$ (3)
17. $36 \text{ DOWN} - 8 \text{ ACROSS}$ (2)
19. A square number (3)
22. The smallest three-digit square number with all its digits different (3)
23. $1 \text{ ACROSS} + 6 \text{ DOWN}$ (2)
24. A multiple of 4 DOWN (3)
25. $27 \text{ ACROSS} + 37 \text{ ACROSS}$ (2)
27. $39 \text{ ACROSS} + 1 \text{ DOWN}$ (2)
29. $200 \times 12 \text{ ACROSS} + 27 \text{ DOWN}$ (4)
33. 10 times 2 dozen (3)
34. A square of a square number (2)
35. $5 \times 1 \text{ ACROSS} + \text{one-seventh of } 12 \text{ ACROSS}$ (3)
37. A half of 8 ACROSS (2)
38. A cube number (2)
39. One less than 6 DOWN (2)

DOWN

1. A prime number (2)
2. The sum of the first ten prime numbers (3)
3. The number of hours in 39 days (3)
4. $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$ (3)
5. $22 \text{ ACROSS} + 28 \text{ DOWN}$ (3)
6. The number of minutes in three-fifths of an hour (2)
10. A multiple of 7 (2)
11. $3 \times 37 \text{ ACROSS}$ (2)
12. $(22 \text{ ACROSS} - 6 \text{ DOWN}) \times 9$ (4)
14. A number all of whose digits are the same (4)
15. A prime number (2)
16. $27 \text{ ACROSS} - 8 \text{ ACROSS}$ (2)
17. A multiple of 9 (2)
18. A prime number (2)
20. A square number (2)
21. The square of a square number (2)
26. $3 \times 12 \text{ ACROSS}$ (2)
27. Two-thirds of 36 DOWN (2)
28. $22 \text{ ACROSS} - 1 \text{ DOWN}$ (3)
30. $1 \text{ ACROSS} \times 26 \text{ DOWN}$ (3)
31. $25 \text{ ACROSS} + 4 \text{ DOWN} + 5 \text{ DOWN}$ (3)
32. $17 \text{ DOWN} + 27 \text{ ACROSS}$ (3)
33. The sum of the digits of 1 DOWN, 17 ACROSS and 17 DOWN (2)
36. One and a half times 27 DOWN (2)