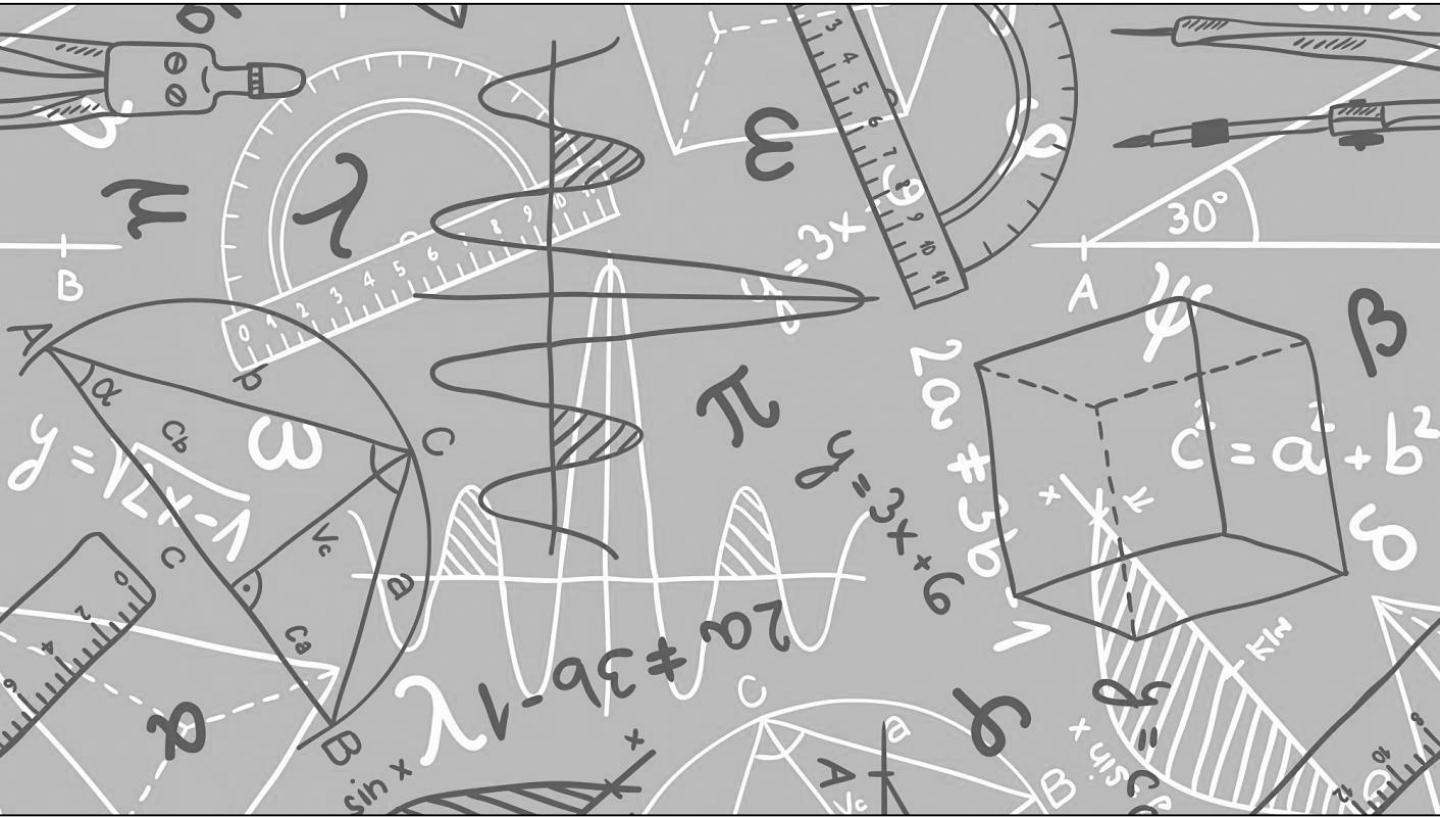




**Hanham
Woods**
Academy

Maths



We can't wait to meet you...

All the Maths teachers at Hanham Woods Academy are very much looking forward to meeting you, normally during transition weeks you find out about us, we find out about you and together we do some Maths. Unfortunately due to transition being cancelled we won't meet in person, however hopefully completing this booklet you will be able to find out some facts about the Maths teachers at Hanham Woods Academy. It is an opportunity for you to find out our favourite numbers and Mathematicians as well as doing some maths either on your own or with your family/carers.

If you have any questions you would like to ask before you arrive email Mr Hocking (Head of Maths) using josh.hocking@clf.uk.

Meet the department...

In the Maths department we have 6 Maths Teachers who's names and room numbers are below. Throughout this booklet you will find out about some of our favourite Mathematicians and numbers. Come back to this page to fill those in. Can you find them all?

M1
MR EARLY

Favourite Number:
Favourite Mathematician:

M2
MR HUXLEY

Favourite Number:
Favourite Mathematician:

M3
MR TOWNSEND

Favourite Number:
Favourite Mathematician:

M4
MRS MA

Favourite Number:
Favourite Mathematician:

M5
MR HOCKING

Favourite Number:
Favourite Mathematician:

F2
MISS WILLIAMS

Favourite Number:
Favourite Mathematician:

Maths Keywords...

At Hanham Woods Academy we really focus on keywords and what they mean. You may have to write these down in lessons. Below are lots of words you will need in September. Can you find all of them in the word search? If you do not know some of them, do some research and see if you can find out what they are!

Key words for the start of Year 7.

P	R	O	B	A	B	I	L	I	T	Y	P	A	F
O	I	T	A	R	E	R	M	O	Q	C	R	U	I
U	E	S	D	L	R	E	U	E	N	M	U	A	B
I	T	I	A	E	O	R	S	R	P	C	R	D	O
M	N	M	E	E	I	M	P	A	F	N	D	E	N
P	E	P	L	N	O	R	R	U	L	I	E	N	A
R	L	L	P	T	U	L	I	Q	I	R	C	O	C
O	A	I	I	C	M	M	M	S	O	B	I	M	C
P	V	F	T	N	A	R	E	T	B	R	M	I	I
E	I	Y	L	B	A	I	C	R	N	L	A	N	O
R	U	F	U	O	R	A	O	I	A	I	L	A	D
L	Q	M	M	M	F	A	R	B	P	T	Q	T	O
L	E	T	C	U	D	O	R	P	E	A	O	O	B
U	Q	C	P	C	B	E	B	I	I	L	I	R	D

SUM
NUMERATOR
SIMPLIFY
PRODUCT
SQUARE
FIBONACCI
MULTIPLE
PRIME
RATIO
FACTOR
DECIMAL
PROBABILITY
EQUIVALENT
IMPROPER
DENOMINATOR

Mr Townsend's favourite number has 3 digits. All the digits are even and the same. It is also known as 'the number of the devil'

Mr. Early's favourite number is both a square and a cube number. It has lots of factors and is below 100.

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 $(8 - 2) \times (6 - 2)$

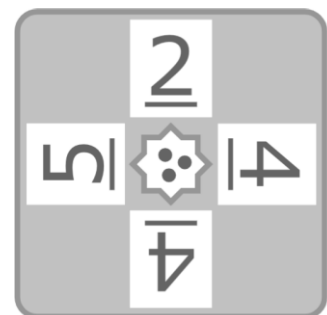
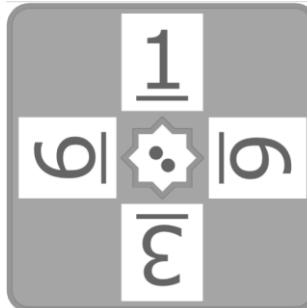
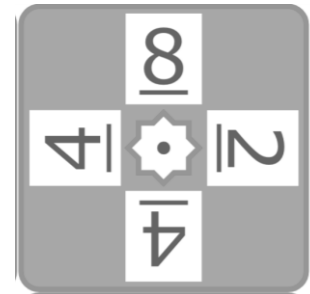
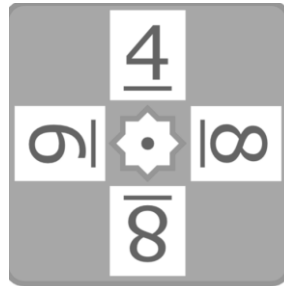
$$8 - 2 = 6$$

$$6 - 2 = 4$$

$$6 \times 4 = 24$$

Your turn!

There are 6 to try below. Be careful.... They get harder as you go! If you get stuck as your family and see if they can help!



Mrs Ma's favourite Mathematician

Liu Hui is a very important Mathematician who lived in China around 1800 years ago. Try and find out what made him so famous!



Mr Hocking's Favourite Number

Mr Hocking is new like you in September. He has hasn't been to Hanham Woods Academy just yet to share his favourite number. Instead he has sent some clues. Can you work out his favourite number?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Guess my number 1

The number is a multiple of 3

ATM

Guess my number 1

The digital sum is 6

ATM

Guess my number 1

Find the number between 1 and 99

ATM

Guess my number 1

It is more than 5 squared

ATM

Guess my number 1

One of the digits is a 2

ATM

Guess my number 1

It is less than 55

ATM

Guess my number 1

It is not a square number

ATM

Key Skills...

Mr Huxley's favourite number is the 2nd triangle number

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

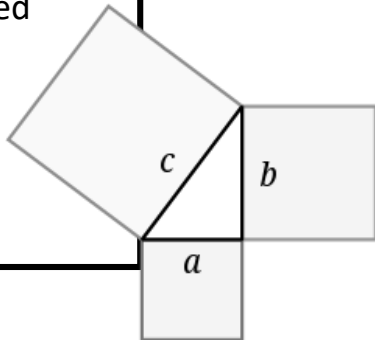
Score

www.mathsbox.org.uk

Miss Williams'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? The picture might give you a clue. You will use it in Year 8!

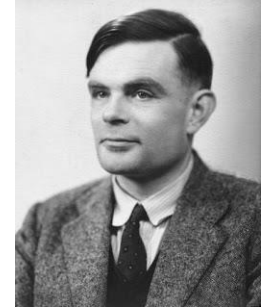


Code Breaking...

Miss Williams's favourite number is found by calculating $3 + 2 \times 5$. It is a prime number

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.



Can you crack the code to reveal the Maths teachers who's favourite mathematician is 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

$8^2 =$	
$9 \times 7 =$	
$56 + 28$	
A prime number in the 20's	
$2 \times 2 \times 2 \times 2 \times 2$	
$8000 \div 100 =$	
$11 \times 5 + 4$	

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?

Mixing English and Maths



1p



2p



3p



4p



5p



6p



7p



8p

If A costs 1p, B costs 2p and so on, can you think of a word that costs a total of exactly 50p?

What about £1?

How much would your name cost?

What is the most expensive word you can make?

Mr Early's favourite Mathematician

Georg Cantor was a German Mathematician who developed an idea called set theory. From this he led work around the symbol below. What does it mean?



Challenge

Can you find out what each of the symbols below are? When do we use them and what do they mean?



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

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Mr Huxley's favourite Mathematician

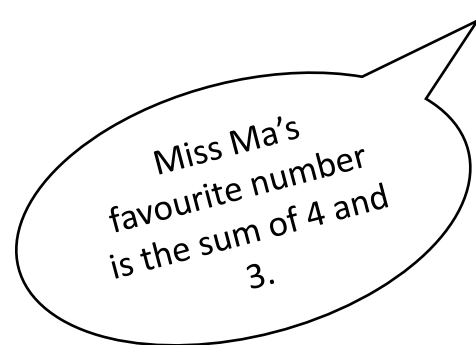
Mr Hegarty is the creator of a website called Hegarty Maths. Hanham Woods Academy use this to help our students all the way up to year 11. We sometimes use it for homework and you can access this on either your phone, ipad, laptop or computer.



hegartymaths

Cross Number...

USE THE QUESTIONS BELOW TO COMPLETE THE CROSS NUMBER.



1	2			3	4		5	6
2	1							
7				8			9	
			10			11		
		12				13	14	
15	16			17	18		19	20
22				23			24	
		25	26			27		
	28		29	30	31			32
33				34			35	36
37				38				39

ACROSS

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

DOWN

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

Logic.....



Sometimes Maths is not just about numbers. Below are some clues about 13 countries competing in a sports event. Unfortunately we do not know the final medal table. Can you use the clues below to work out the order in which each country finished?

1. Turkey and Mexico both finished above Italy and New Zealand.
2. Portugal finished above Venezuela, Mexico, Spain and Romania.
3. Romania finished below Algeria, Greece, Spain and Serbia.
4. Serbia finished above Turkey and Portugal, both of whom finished below Algeria and Russia.
5. Russia finished above France and Algeria.
6. Algeria finished below France but above Serbia and Spain.
7. Italy finished below Greece and Venezuela, but above New Zealand.
8. Venezuela finished above New Zealand but below Greece.
9. Greece finished below Turkey, who came below France.
10. Portugal finished below Greece and France.
11. France finished above Serbia, who came above Mexico.
12. Venezuela finished below Mexico, and New Zealand came above Spain.



Maths Challenge



United Kingdom
Mathematics Trust

At Hanham we want to make sure every student is pushed to be the best Mathematician they can be. We enter some students for the Junior Maths Challenge each year. This is a national competition and is really tough.

Feeling brave? Have a go at the problems below!

How many minutes is it from 23:35 today to 01:15 tomorrow?

- A 100 B 110 C 120 D 130 E 140

Which of these is closest to 7?

- A 7.09 B 6.918 C 7.17 D 6.7 E 7.085

What is the last digit of the smallest positive integer whose digits add to 2019?

- A 1 B 4 C 6 D 8 E 9

In the multiplication shown alongside, T , R , A and P are all different digits.

What is the value of R ?

- A 0 B 1 C 5 D 8 E 9

$$\begin{array}{r} T R A P \\ \times \quad 9 \\ \hline P A R T \end{array}$$

Mr Townsend's Favourite Mathematician

Renee Descartes was a key figure in the scientific revolution of the 17th Century, and a pioneer of modern mathematics. He used letters to represent numbers. Can you find out what this mathematical topic is?



Would you like to know
the answers?

Bring this booklet with your
answers to Hanham Woods
Academy when you come to
school and speak to Mr Hocking
or any of the Maths team.

We hope to see you soon!



**Hanham
Woods**
Academy