

Your transition
Maths Challenge



**TRANSITION
TASK**



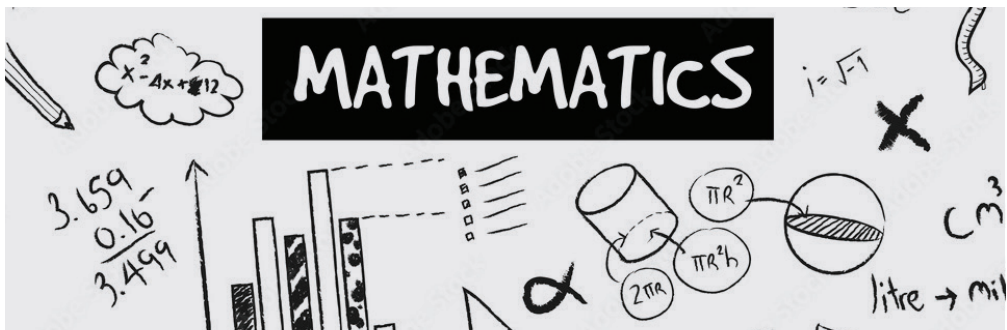
MOVING ON TO **MATHS**

at Abbey Grange Academy



In Partnership to **Educate, Nurture & Empower**





WE CAN'T WAIT TO MEET YOU...

All the Maths teachers at Abbey Grange Academy are very much looking forward to meeting you! Please complete this booklet and bring it in to your first Maths lesson when you start at the school in September.

THERE ARE 6 CHALLENGES TO ATTEMPT:



The 24 Game



Key Skills



Maths Keywords



Mrs Morgan's Favourite Number



Code Breaking



Cross Number

THE 24 GAME

The aim of the game is to make the number 24.

For each game you have 4 numbers, you have to use **ALL** four numbers.

You may add, subtract, multiply, or divide the numbers to make 24.

You can use brackets too!

EXAMPLE: 2 2 6 8

To make 24,
calculate:

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

$$8 - 2 = 6$$

$$6 - 2 = 4$$

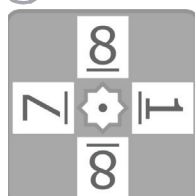
$$6 \times 4 = 24$$



EASY



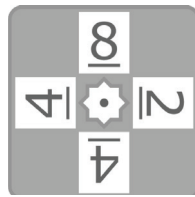
Your working out...



Your working out...



Your working out...



Your working out...

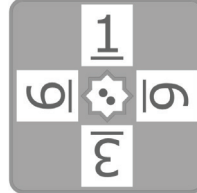
THE 24 GAME



MEDIUM



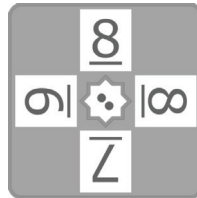
Your working out...



Your working out...



Your working out...



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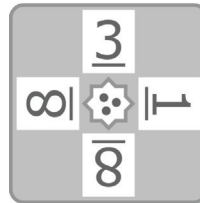
THE 24 GAME



HARD



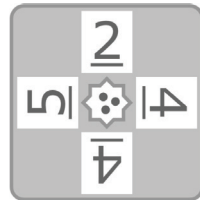
Your working out...



Your working out...



Your working out...



Your working out...

SKILLS CHECK

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Complete the skills check questions to test your knowledge.

The calculations below are based on topics you'll have learned in Year 6.

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 $6 + 11 \times 3 =$	Your Score:

MATHS KEYWORDS

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At the start of Maths lessons you may be asked to write the maths keywords down in your book.

Can you find all the keywords you will need for your maths lessons at Abbey Grange Academy?

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

ADD

ASCENDING

DECIMAL

DESCENDING

ESTIMATE

HUNDREDS

PERIMETER

PLACEVALUE

POLYGON

ROUND

SQUARENUMBER

SUBTRACT

TENS

UNITS



MRS MORGAN'S FAVOURITE NUMBER

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Our Principal, Mrs Morgan, has a favourite number.
Use the clues below to help identify what it is!



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



The number is a
multiple of 3

The digital sum is
6



Find the number
between 1 and 99

It is more than
5 squared

One of the digits
is a 2

It is not a
square number

It is less than 55

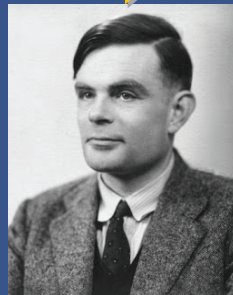
CODE BREAKING

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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 a 3-word phrase?



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	48

$5 \times 11 =$	
$47 \times (4-3) =$	
$53 - 6 =$	
$29 - 19 - 1 =$	
$33 \times 3 =$	

$10 \times 5 =$	
$9 \times 7 =$	
$72 \div 4 =$	
$18 - 9 =$	
$15 \times 2 =$	

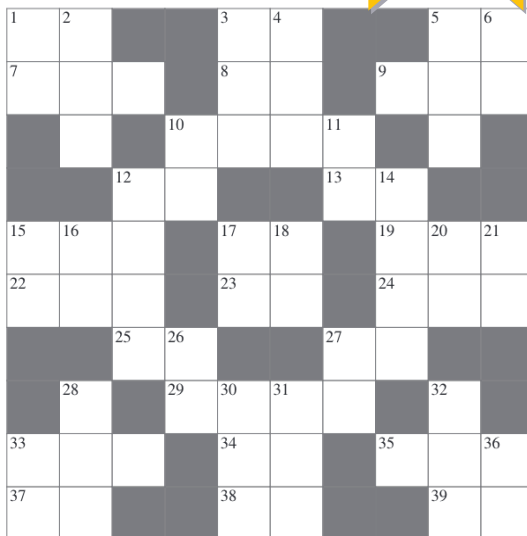
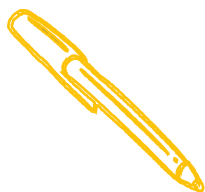
$13 \times 2 =$	
$39 + 16 =$	
$84 \div 4 =$	
$19 + 45 =$	
$26 + 4 =$	



CROSS NUMBER

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Use the questions below
to complete the cross
number grid.



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 ACROSS + 3 DOWN + 6 DOWN + 21 DOWN + 36 DOWN (4)
12. 39 ACROSS - 33 DOWN (2)
13. Twice (1 ACROSS + 1 DOWN) (2)
15. 1 DOWN $\times$ 38 ACROSS (3)
17. 36 DOWN - 8 ACROSS (2)
19. A square number (3)
22. The smallest three-digit square number with all its digits different (3)
23. 1 ACROSS + 6 DOWN (2)
24. A multiple of 4 DOWN (3)
25. 27 ACROSS + 37 ACROSS (2)
27. 39 ACROSS + 1 DOWN (2)
29. 200×12 ACROSS + 27 DOWN (4)
33. 10 times 2 dozen (3)
34. A square of a square number (2)
35. 5×1 ACROSS + one-seventh of 12 ACROSS (3)
37. A half of 8 ACROSS (2)
38. A cube number (2)
39. One less than 6 DOWN (2)
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 ACROSS + 28 DOWN (3)
6. The number of minutes in three-fifths of an hour (2)
10. A multiple of 7 (2)
11. 3×37 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 ACROSS - 8 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. 3×12 ACROSS (2)
27. Two-thirds of 36 DOWN (2)
28. 22 ACROSS - 1 DOWN (3)
30. 1 ACROSS $\times$ 26 DOWN (3)
31. 25 ACROSS + 4 DOWN + 5 DOWN (3)
32. 17 DOWN + 27 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)

Questions & Notes





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