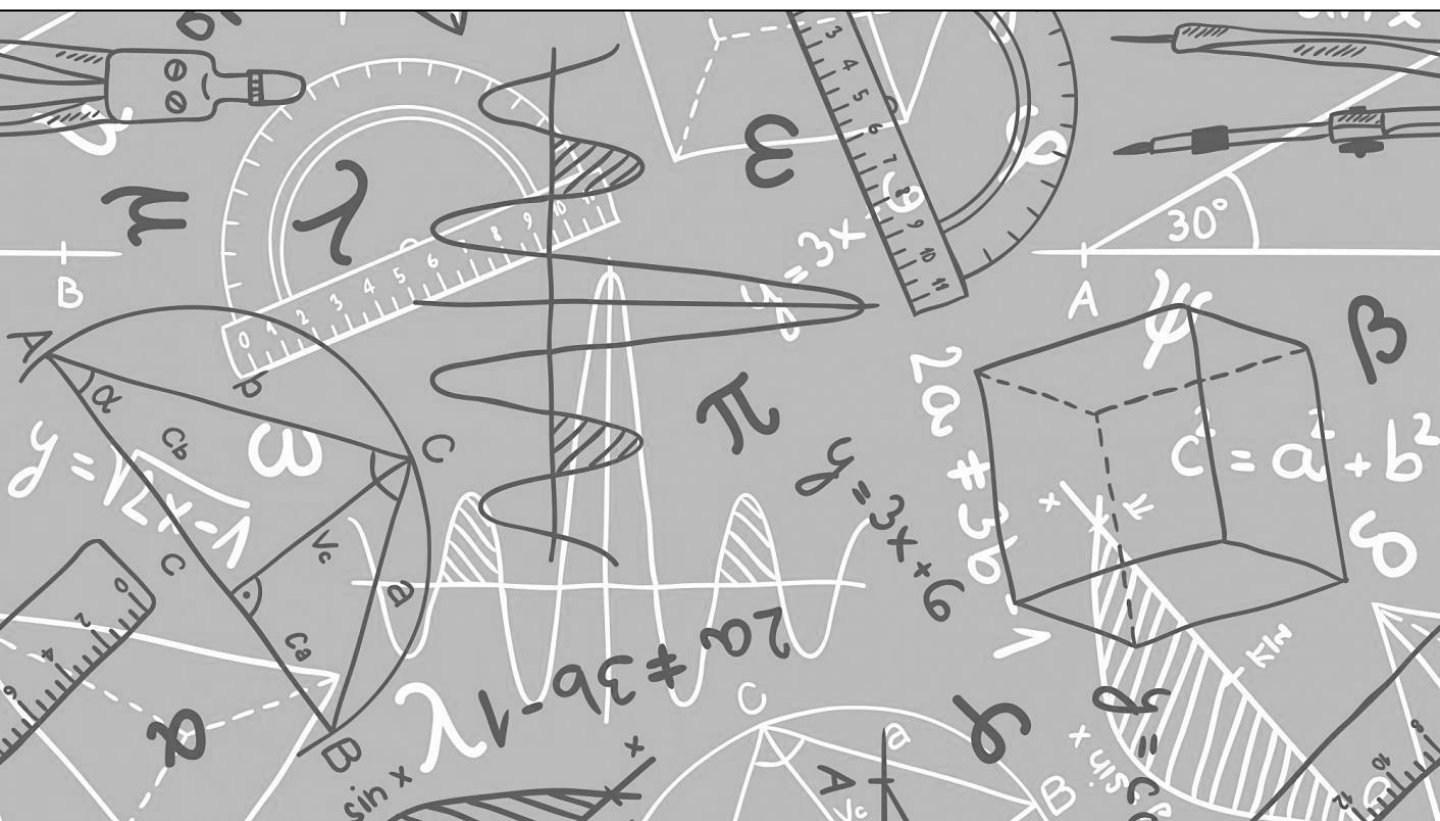


Maths



We can't wait to meet you...

All the Maths teachers at Ysgol Rhiwabon 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 slightly different this year, it is likely we may not meet in person before September. Hopefully completing this booklet you will be able to find out some facts about the Maths teachers at Ysgol Rhiwabon, do some research into some of our favourite Mathematicians and do some Maths either on your own or with your family/carers.

Meet the department...



Mrs Williams



Mr Tonks



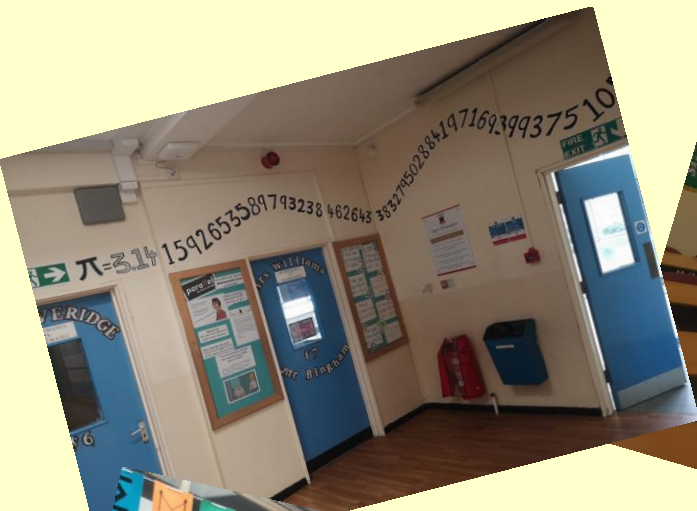
Mrs Beveridge



Mrs Lewis



Mr Bingham





The 24 game...

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

$$8 - 2 = 6$$

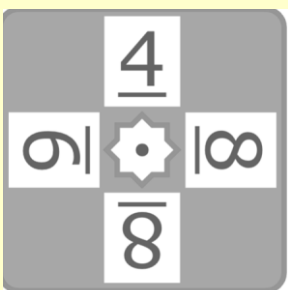
$$6 - 2 = 4$$

$$6 \times 4 = 24$$

Try this with your family – who is the quickest?

ONE DOT - EASIEST

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



Mrs Williams' favourite number is the sum of $4 + 7$

The 24 game...

Mr Tonks
favourite
number is 70
divided by 5

TWO DOT - MEDIUM



THREE DOT - HARDER





Mrs
Beveridge'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

Mrs Lewis' favourite Mathematician is Fibonacci who was an Italian man who studied Maths 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...

Sometimes in Maths lesson you will be asked to write the Maths keywords down in your book. Can you find all the keywords you will need for your first half term at Ysgol Rhiwabon?

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

Mrs Lewis' favourite number is 5 squared

ADD
ASCENDING
DECIMAL
DESCENDING
ESTIMATE
HUNDREDS
PERIMETER

PLACEVALUE
POLYGON
ROUND
SQUARENUMBER
SUBTRACT
TENS
UNITS

Mrs Williams' favourite Mathematician, Leonhard **Euler** (pronounced Oiler), was an 18th century 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.



Mr. Bingham's Favourite Number

Mr. Bingham is one of our Assistant Headteachers. He has sent me some clues to his favourite number. Can you work out Mr. Bingham's 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 Cowlinshaw's
favourite number
is the product of
 $3 \times 3 \times 3$



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

Name :

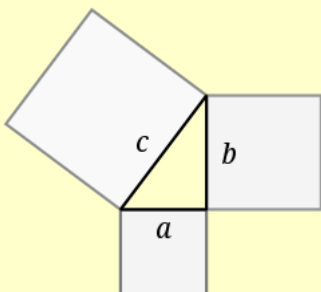
61.2

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

www.mathsbox.org.uk



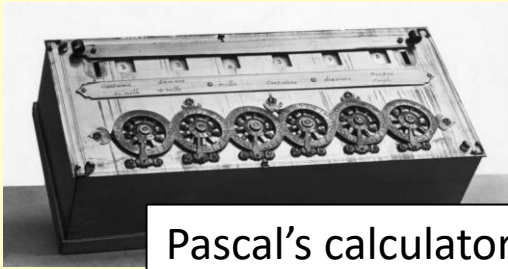
Mrs Beveridge's
favourite
Mathematician

Pythagoras of Samos was a famous Greek Mathematician and Philosopher (c. 570 – c. 495 BC). He is best known 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.

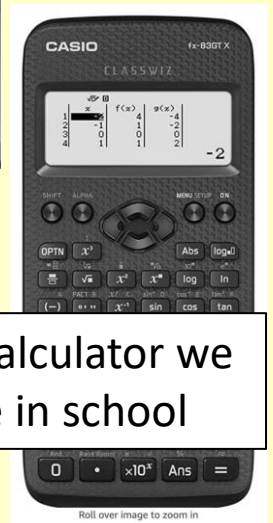
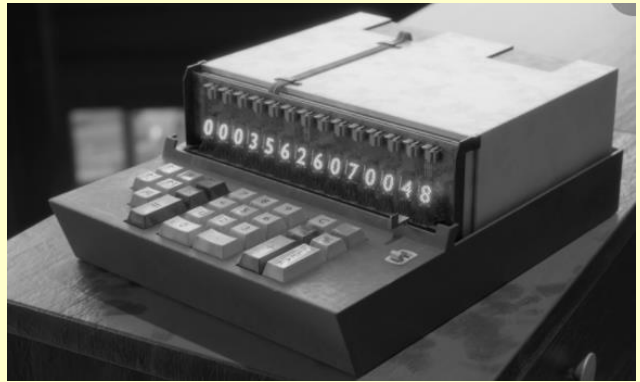
Can you find out what the Pythagorean theorem is? You will use it in Year 9.

The calculator transformation

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



Pascal's calculator



The calculator we use in school

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?

Mr. Bingham's favourite Mathematician

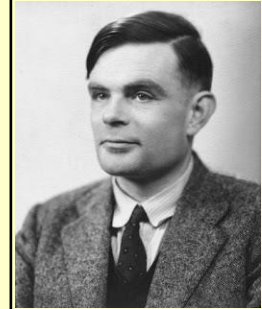
Code Breaking...

Mr Tonks'
favourite
Mathematician



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 codes?

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

$5 \times 11 =$	
$252 \div 3 =$	
$107 - 15 =$	
$7 \times 3 =$	
$72 \div 8 =$	

$85 - 62 =$	
$9 \times 3 =$	
$200 \div 4 =$	
$18 + 45 =$	
$73 - 14 =$	
$135 \div 5 =$	
$27.5 \times 2 =$	
$6^2 - 10 =$	

$5 \times 2 =$	
$19 + 13 =$	
$36 \div 2 =$	
$24 + 8 =$	
$60 \div 6 =$	
$28 - 19 =$	

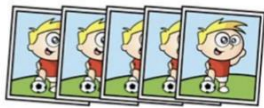
Can you make up some calculations to spell out your name using the same code breaker grid?

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

Maths Challenges...

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

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

www.mathsbox.org.uk

René Descartes

Descartes is considered the father of modern Philosophy, a key figure in the scientific revolution of the 17th century, and a pioneer of modern Mathematics. Many people also call him the father of analytic geometry, which connects the fields of algebra and geometry.

Mr.Cowlinshaw's
favourite
Mathematician

Maths Challenges...

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.

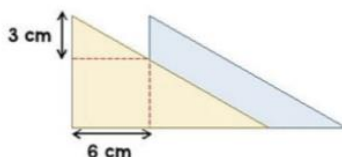
- The ratio of children to adults in the race is **2:3**.
- The mean time for the adults is **2 minutes 15 seconds**.
- The mean time for all 80 people is **3 minutes**.

Find the mean time for the children.

Here are two triangles identical in size.



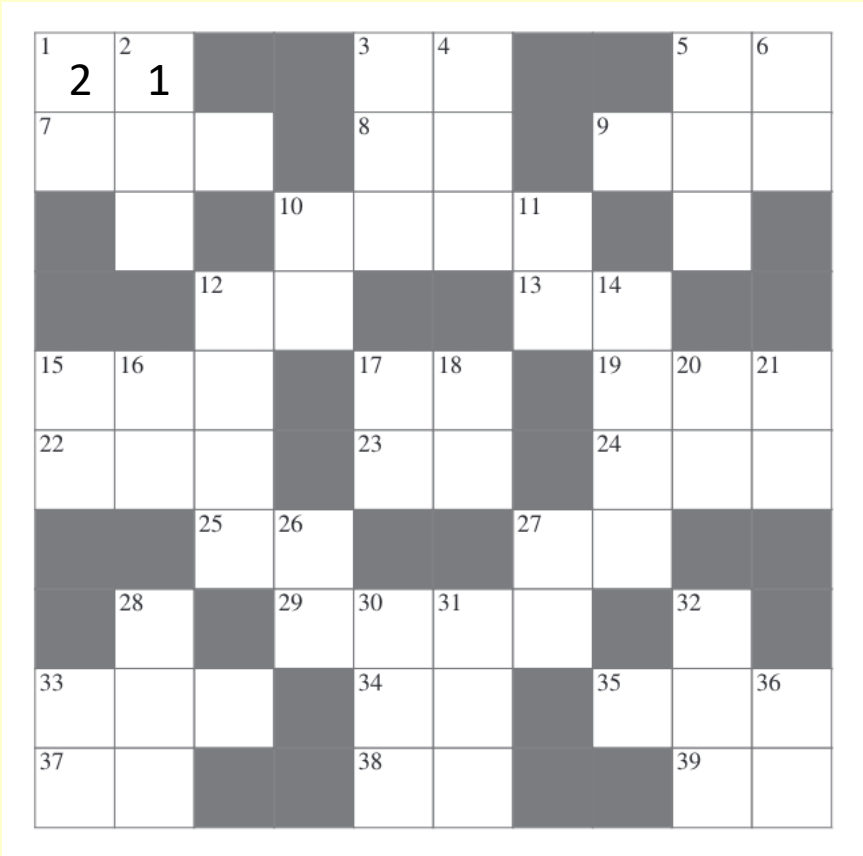
The two triangles are overlapped.



What is the area of the blue triangle showing?

Cross Number...

USE THE QUESTIONS BELOW TO COMPLETE THE CROSS NUMBER.



ACROSS

DOWN

- | | |
|--|--|
| 1. The number of spots on a standard dice (2) | 1. A prime number (2) |
| 3. The largest two-digit multiple of 13 (2) | 2. The sum of the first ten prime numbers (3) |
| 5. One more than 8 ACROSS (2) | 3. The number of hours in 39 days (3) |
| 7. One quarter of the square of 6 DOWN (3) | 4. $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$ (3) |
| 8. $2 \times 2 \times 2 \times 2 \times 2$ (2) | 5. 22 ACROSS + 28 DOWN (3) |
| 9. A cube number (3) | 6. The number of minutes in three-fifths of an hour (2) |
| 10. 15 ACROSS + 3 DOWN + 6 DOWN + 21 DOWN + 36 DOWN (4) | 10. A multiple of 7 (2) |
| 12. 39 ACROSS - 33 DOWN (2) | 11. 3×37 ACROSS (2) |
| 13. Twice (1 ACROSS + 1 DOWN) (2) | 12. $(22 \text{ ACROSS} - 6 \text{ DOWN}) \times 9$ (4) |
| 15. 1 DOWN \times 38 ACROSS (3) | 14. A number all of whose digits are the same (4) |
| 17. 36 DOWN - 8 ACROSS (2) | 15. A prime number (2) |
| 19. A square number (3) | 16. 27 ACROSS - 8 ACROSS (2) |
| 22. The smallest three-digit square number with all its digits different (3) | 17. A multiple of 9 (2) |
| 23. 1 ACROSS + 6 DOWN (2) | 18. A prime number (2) |
| 24. A multiple of 4 DOWN (3) | 20. A square number (2) |
| 25. 27 ACROSS + 37 ACROSS (2) | 21. The square of a square number (2) |
| 27. 39 ACROSS + 1 DOWN (2) | 26. 3×12 ACROSS (2) |
| 29. $200 \times 12 \text{ ACROSS} + 27 \text{ DOWN}$ (4) | 27. Two-thirds of 36 DOWN (2) |
| 33. 10 times 2 dozen (3) | 28. 22 ACROSS - 1 DOWN (3) |
| 34. A square of a square number (2) | 30. 1 ACROSS \times 26 DOWN (3) |
| 35. $5 \times 1 \text{ ACROSS} + \text{one-seventh of } 12 \text{ ACROSS}$ (3) | 31. 25 ACROSS + 4 DOWN + 5 DOWN (3) |
| 37. A half of 8 ACROSS (2) | 32. 17 DOWN + 27 ACROSS (3) |
| 38. A cube number (2) | 33. The sum of the digits of 1 DOWN, 17 ACROSS and 17 DOWN (2) |
| 39. One less than 6 DOWN (2) | 36. One and a half times 27 DOWN (2) |