

Maths Busters!

Volume 1, Issue 2

October 2019



Maths Week 2019

Welcome to the second edition of Maths Buster!

We've added more puzzles, pictures and hopefully something for everybody from 3rd to 6th. You can try these out by yourself, with a friend or in class!

Let us know how you've got on and give any comments so we can make this magazine even better! We look forward to getting any new maths puzzles for inclusion in the next edition.



Try it Out!

Did you know that if you add the number of faces to the number of vertices and then take away the number of edges in any 3D shape, you will always get the answer 2.

Santa's Little Helpers

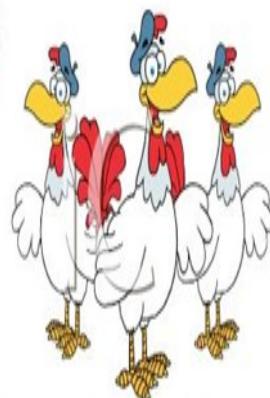
Santa's elves are making a new football kit for the school football team. They have to make 20 jerseys and number them 1-20. How many figure 1s will they need?



Sweet Tooth!

Amy had a bag of sweets. She gave half of them to Tiernan. She then ate half of what she had left. She now has 5 sweets. How many sweets had she at first?

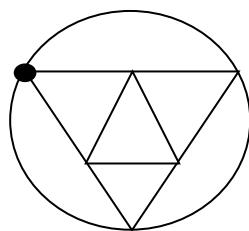
3



Eggciting!

Adam, Ryan and Cian have three hens who lay a total of three eggs every three days. How many more hens do they need so that Adam, Luke and Cian can have an egg each for their tea

Drawing Shapes



Draw these shapes without lifting your pencil. Do not go over the same line twice. Start at the dot.

Digging!

If it takes two people two days to dig two holes, how long will it take one person to dig one hole?



Bright Spark

You are in a room with only a candle, a bundle of wood in the fireplace and a newspaper. It is cold and dark and you only have one match. What will you light first?



Missing Numbers

What are X and Y?

$$\begin{array}{r}
 31X4 \\
 +6Y95 \\
 \hline
 10019
 \end{array}
 \qquad
 \begin{array}{r}
 491X \\
 -3Y01 \\
 \hline
 1111
 \end{array}$$

Socks

There are 20 socks in a drawer. Ten of them are blue and 10 are black. The room is pitch dark. What is the least number of socks that I need

to take out to be certain of having:
a matching pair?



Saws

If it takes me 1 minute to saw through a plank of wood, how long will it take me to divide a plank of wood into 12 pieces?



Stars

As you can see the design is made from 10 stars and it points upwards. Can you choose 3 stars and reposition them so that the design points downwards?



Boats and Ropes

A boat lies on the beach. There is a rope ladder over the side of the boat. The rope ladder has 10 rungs which are 20 centimetres apart. The water is coming in and is rising at a rate of 40 centimetres an hour. How long will it be before the water reaches the top rung?



Initial Numbers

12 N on a C F

100 Y in a C

Work these out:

Clue:

8 S on an O

31 D in O

7 C in the R

Answer:

26 L in the A

4 S on a R

7 Colours in the Rainbow

52 C in a D

1000 M in a K

Aliens

100 aliens attended the intergalactic meeting on Earth:

78 had two heads

28 had three eyes

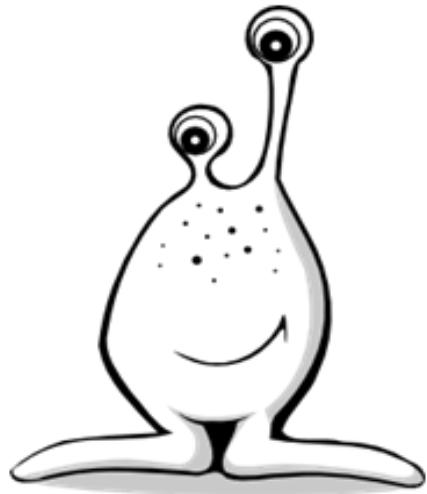
21 had four arms

12 had two heads and three eyes

9 had three heads and four arms

3 had all three unusual features

How many had none of these unusual features?



Cutting and Chopping

A factory was cutting rolls of cloth into 1 metre lengths, from a 200 metre roll. How long would it take for the machine to cut the roll if each cut took 4 seconds?



A butcher had a number of legs of lamb to chop up. He copped each leg into 11 pieces. He chopped at the rate of 45 strokes per minute. How many legs would he chop in 22 minutes?

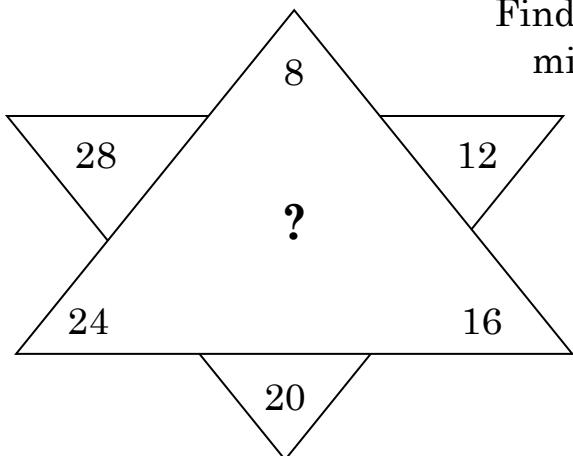
Water Trouble



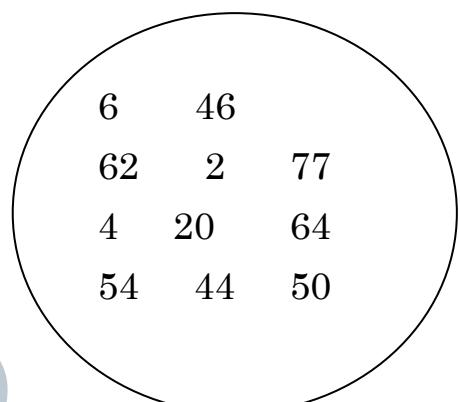
A farmer is working in one of his fields. He has an empty 5 litre can and an empty 3 litre can. The cans have no marking on them but measure 5 litres and 3 litres

accurately. The problem is the farmer wants to mix some weedkiller with exactly 4 litres of water. There is a well in the field so there is plenty of water. How will he measure 4 litres?

The Snowman's Puzzles



Find the number in the middle of the star. It is related to all those in its points.



Find the odd one out!

Digit Power

What is the four digit number in which the first digit is one-third the second, the third is the sum of the first and the second, and the last is three times the second?

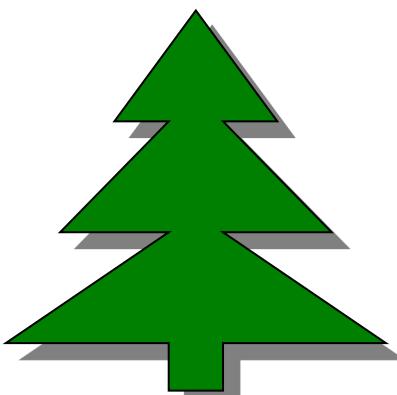


Burning Time

A rope burns for exactly one hour. How do you measure 45 minutes, given two such ropes?

Jellybeans

Claire ate 80 jellybeans between Monday and Friday. Each day she ate 5 more than she had eaten the day before. How many jellybeans did Claire eat on Monday?



Christmas Trees

A Christmas tree was planted in a forest. It doubled in height every year. The tree is now ten years old and 24 metres tall. When was the tree 12 metres tall?

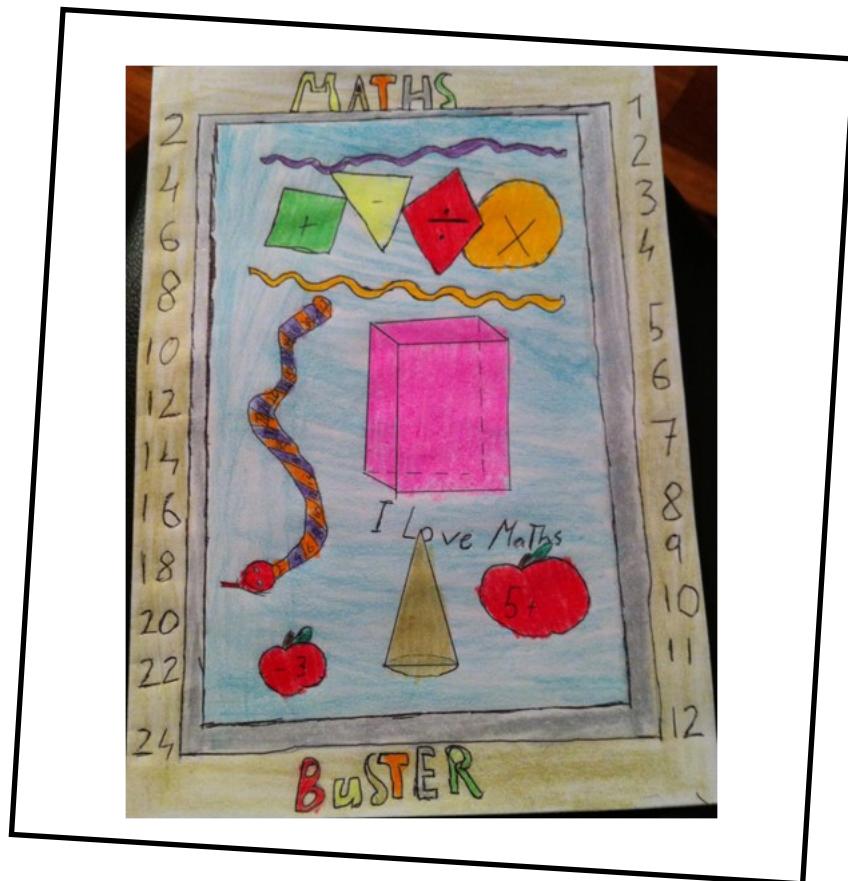
Maths Busters!

Websites to Explore!

www.teachingtables.co.uk

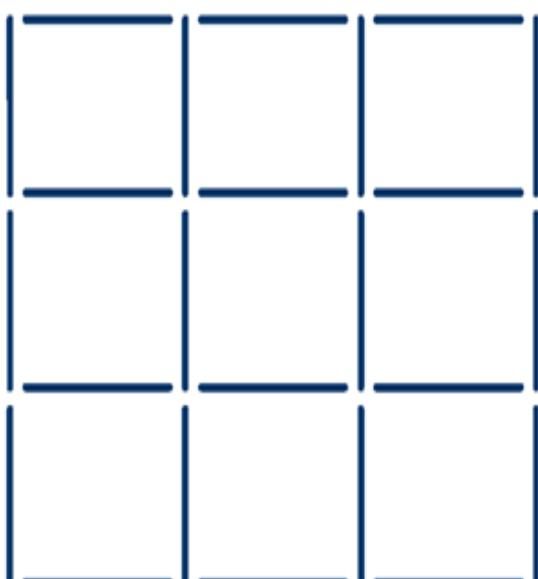
www.coolmath4kids.com

Send your puzzles and answers
to Mr. Brennan



Square Puzzle

Set out 24 lollipop sticks to make squares as shown below:



Try the following:

Take away 8 sticks and leave 3 squares.

Take away 8 sticks and leave 2 squares.

Rearrange all the sticks to make 1 large square.

Take away 6 sticks and leave 3 squares.

Rearrange all the sticks to make 2 squares.

Take away 4 sticks and leave 5 squares.

Rearrange all the sticks to make 3 squares.

Take away 8 sticks and leave 5 squares.