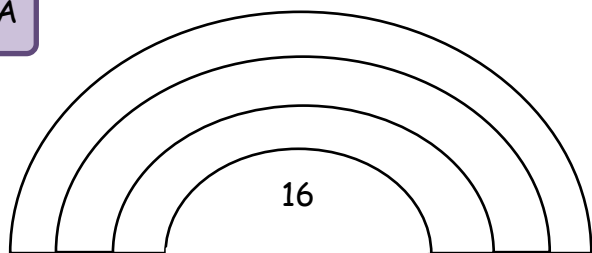


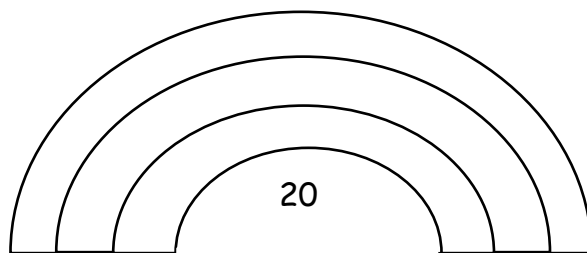
Choose from A, B or C. If you want to complete more than one, you can!

Find the factor pair rainbows for these numbers. You could colour in the rainbow to show the matching pairs.

A

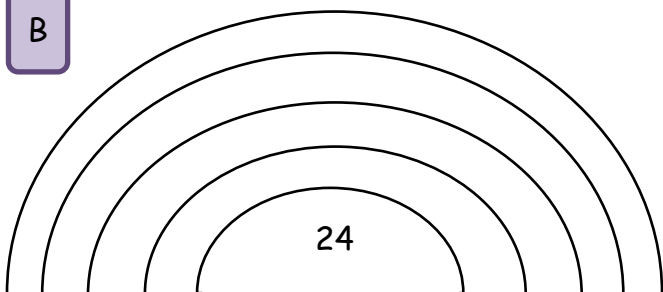


1, \_ , \_ x \_ , \_ , 16

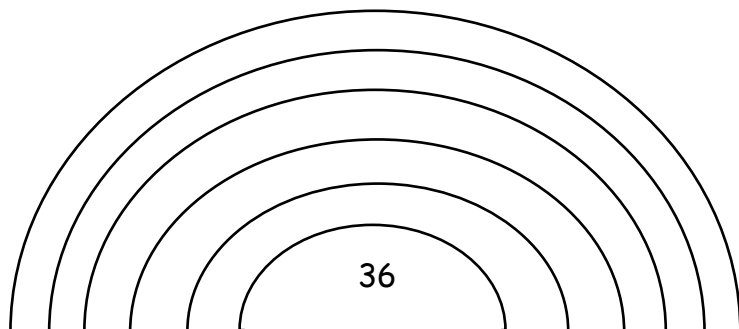


\_ , \_ , \_ x \_ , \_ , \_

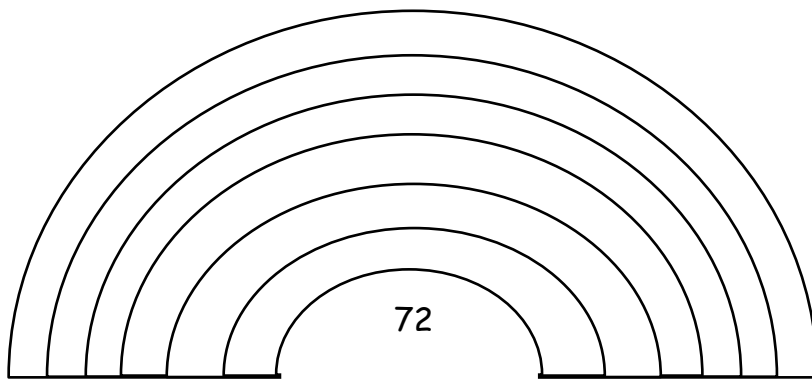
B



\_ , \_ , \_ , \_ x \_ , \_ , \_ , \_



\_ , \_ , \_ , \_ , \_ x \_ , \_ , \_ , \_ , \_



\_ , \_ , \_ , \_ , \_ , \_ x \_ , \_ , \_ , \_ , \_ , \_

C

Use your knowledge of factor pairs to investigate this problem.

Some numbers are equal to the sum of all their factors (not including the number itself).

e.g. 6 has 4 factors: 1, 2, 3 and 6

If you add up all the factors except 6 itself,  $1+2+3$ , you get 6!

Therefore, 6 is **equal to the sum of its factors** (not including the number itself).

How many other numbers can you find that are **equal to the sum of their factors**?

Which numbers are less than the sum of their factors?

Which numbers are greater than the sum of their factors?



To help you keep your times tables sharp, remember to regularly practise on Times Tables Rock Stars. Look out for battles and help your team win!

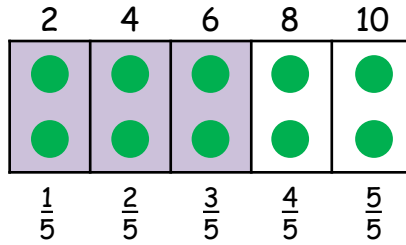




Website to support your learning:

<https://www.youtube.com/watch?v=D4DL4UleRuI>

$\frac{3}{5}$  of 10 = \_\_\_\_\_



I know....

$\frac{1}{5}$  of 10 = 2 ( $10 \div 5 = 2$ )

So...

$\frac{3}{5}$  of 10 = 6 ( $3 \times 2 = 6$ )

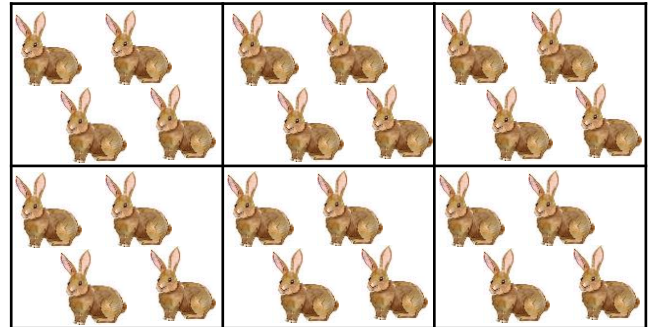
**A** Use pictorial representations to help solve these calculations.

At the pet shop, there are an equal number of rabbits in hutches. Here are the current rabbits in hutches.

1a) How many rabbits are in each hutch? \_\_\_\_\_

b)  $\frac{1}{6} = 4$        $\frac{2}{6} =$  \_\_\_\_\_       $\frac{3}{6} =$  \_\_\_\_\_

$\frac{4}{6} =$  \_\_\_\_\_       $\frac{5}{6} =$  \_\_\_\_\_       $\frac{6}{6} =$  \_\_\_\_\_



2) The pet shop also has 40 mice in 8 hutches, each holding the same number.

$\frac{1}{8} =$  \_\_\_\_\_       $\frac{2}{8} =$  \_\_\_\_\_       $\frac{3}{8} =$  \_\_\_\_\_

$\frac{4}{8} =$  \_\_\_\_\_       $\frac{5}{8} =$  \_\_\_\_\_       $\frac{6}{8} =$  \_\_\_\_\_

$\frac{7}{8} =$  \_\_\_\_\_       $\frac{8}{8} =$  \_\_\_\_\_




2) There are some guinea pigs at the pet shop. They put one sixth of them in one hutch. There are 3 in each hutch. How many guinea pigs does the pet shop have in total? Use the space below to show how you worked out your answer.

guinea pigs



**B** Solve these worded problems, involving fractions of quantities.

1) Lavender gave  $\frac{2}{5}$  of her 20 sweets to Parvati. How many sweets did Parvati have?

2) Ernie was at the shop. He bought  $\frac{6}{9}$  of the apples that were in the basket. There were 54 apples in the basket in total. How many apples did Ernie buy?

3) There were 120 people at the school Christmas show. During the break of the performance,  $\frac{5}{6}$  of the audience went to buy ice cream. How many audience members bought ice cream?

**C** Explain your reasoning, using your knowledge of fractions.

1) There are 70 goldfish in a tank. Dean wants to move  $\frac{7}{10}$  of them to another tank. This is how he thinks he should calculate how many fish to move.

What mistake has Dean made? Explain how he should work it out.

First, I need to divide the number of goldfish by the numerator (7) and then multiply this by the denominator (10).

2) There are 40 fish in another tank. 15 of them are angel fish.  $\frac{2}{5}$  are guppies. The rest are zebra fish. Dean says there are more guppies than any other fish. Is he right? Explain how you know.



Websites to extend your learning:

<https://www.topmarks.co.uk/Flash.aspx?f=bingofractionsofamountsv3>

<https://mathsframe.co.uk/en/resources/resource/264/Crystal-crash-fractions-numbers>