

Diving into Mastery



Factor Pairs

twinkl

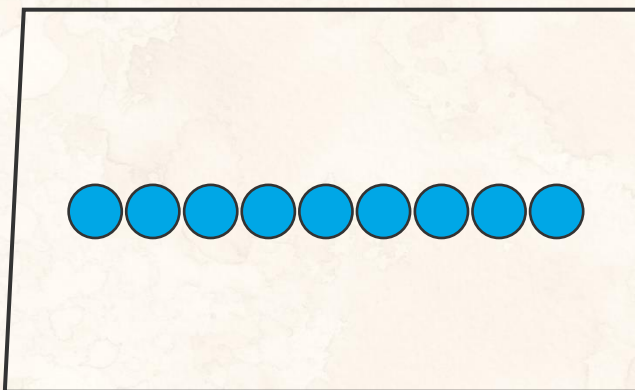
Aim

- Recognise and use factor pairs and commutativity in mental calculations.



Find the two factor pairs for 9.
Show the arrays to match each factor pair.

Array 1



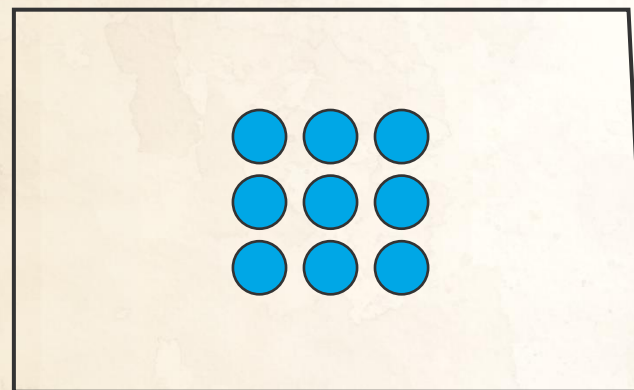
Factor Pair:

1

and

9

Array 2



Factor Pair:

3

and

3



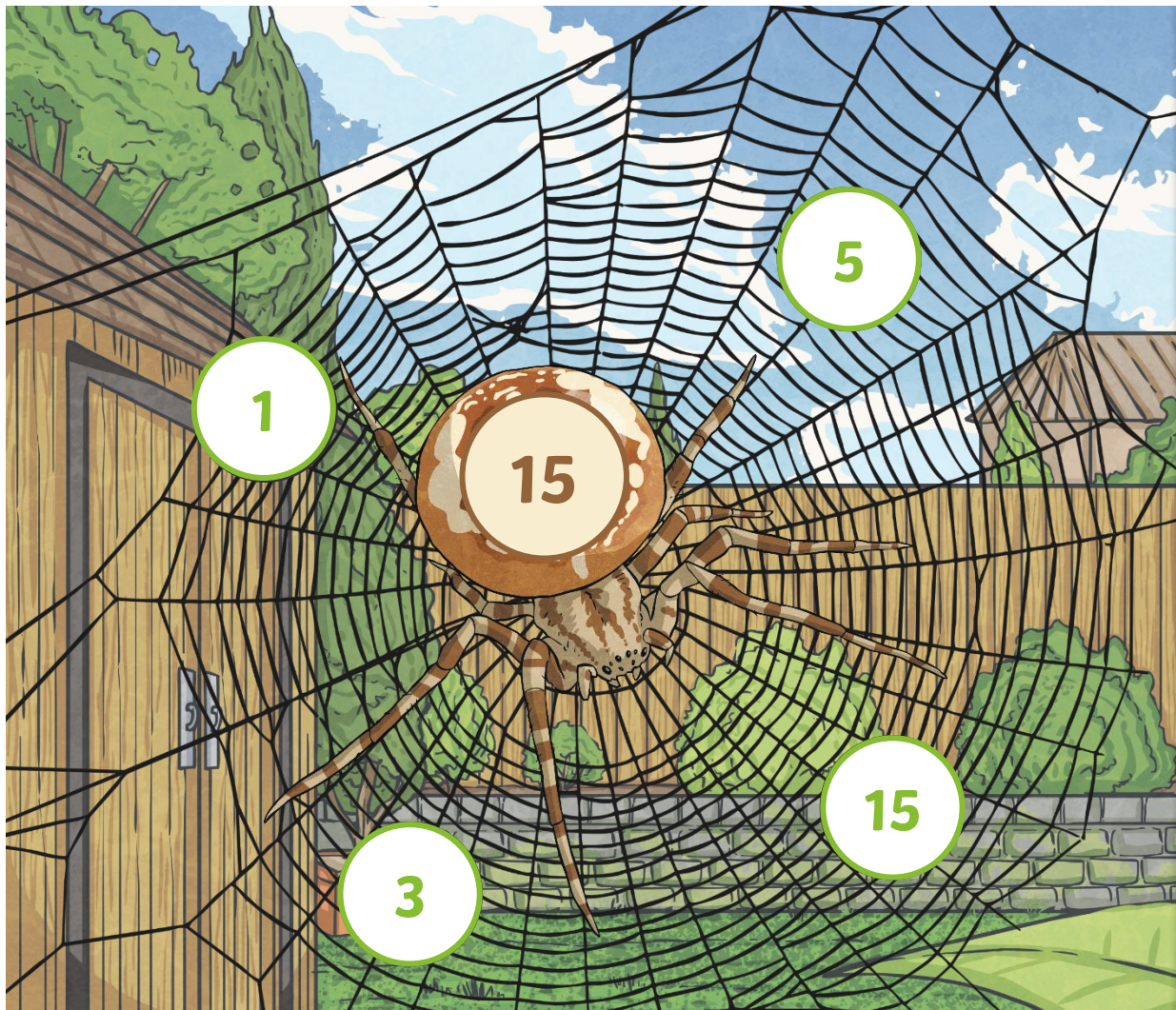
Circle all the numbers that are **not** factors of 30.

1	2	3	4	5
6	7	8	9	10

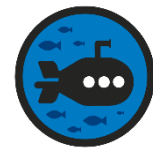
Find two more factors for 30 that are not in the list above.

15

30



Find the factors of 15 to complete the factor spiderweb.



Which factor pair is the odd one out and why?

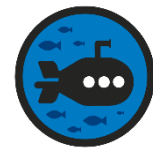
4 and 14

5 and 11

2 and 28

7 and 8

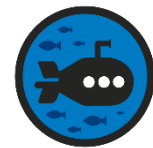
5 and 11 is the odd one out. All the other factor pairs have a product of 56, but the factor pair of 5 and 11 has a product of 55.



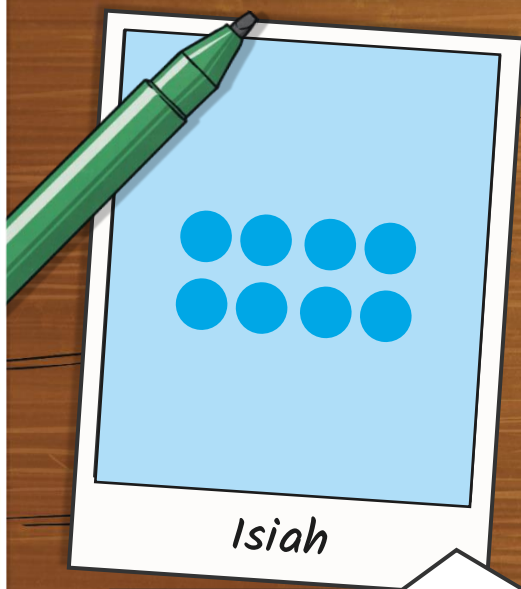
Read the statement below. Is it true or false? Explain your answer.

Products will always have an even number of factors.

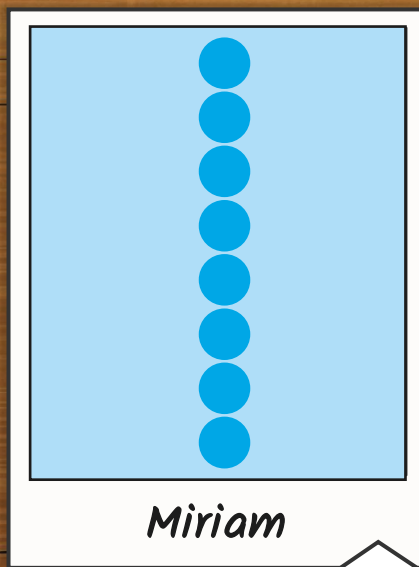
False because square numbers have an odd number of factors. E.g. 16 has 1 and 16, 2 and 8, 4 so it has 5 factors.



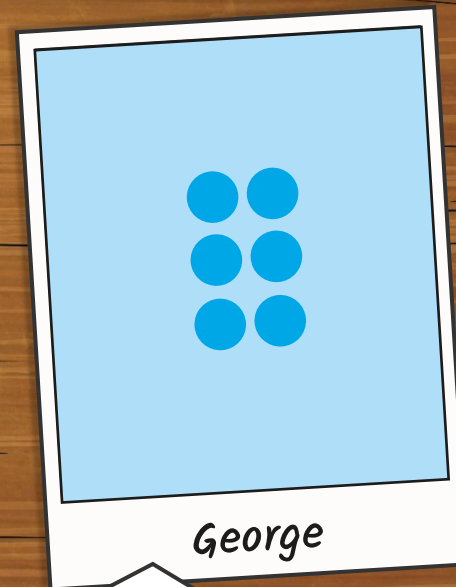
I agree with Isiah and Miriam because their numbers are both factor pairs for 8 so will create arrays with even rows and columns. I disagree with George because 3 and 2 is not a factor pair for 8. 3 rows with 2 in each row creates an array of 6.

*Isiah*

You can make an array that has 2 rows with 4 in each.

*Miriam*

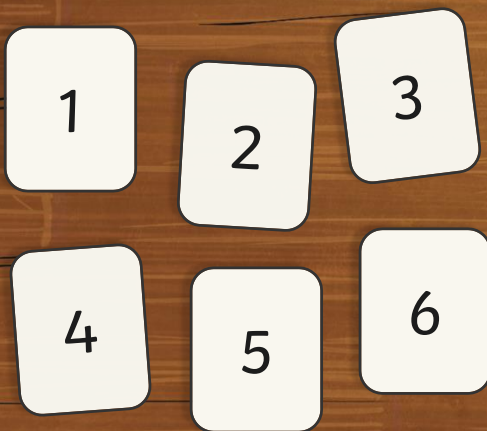
You can make an array that has 1 column of 8.

*George*

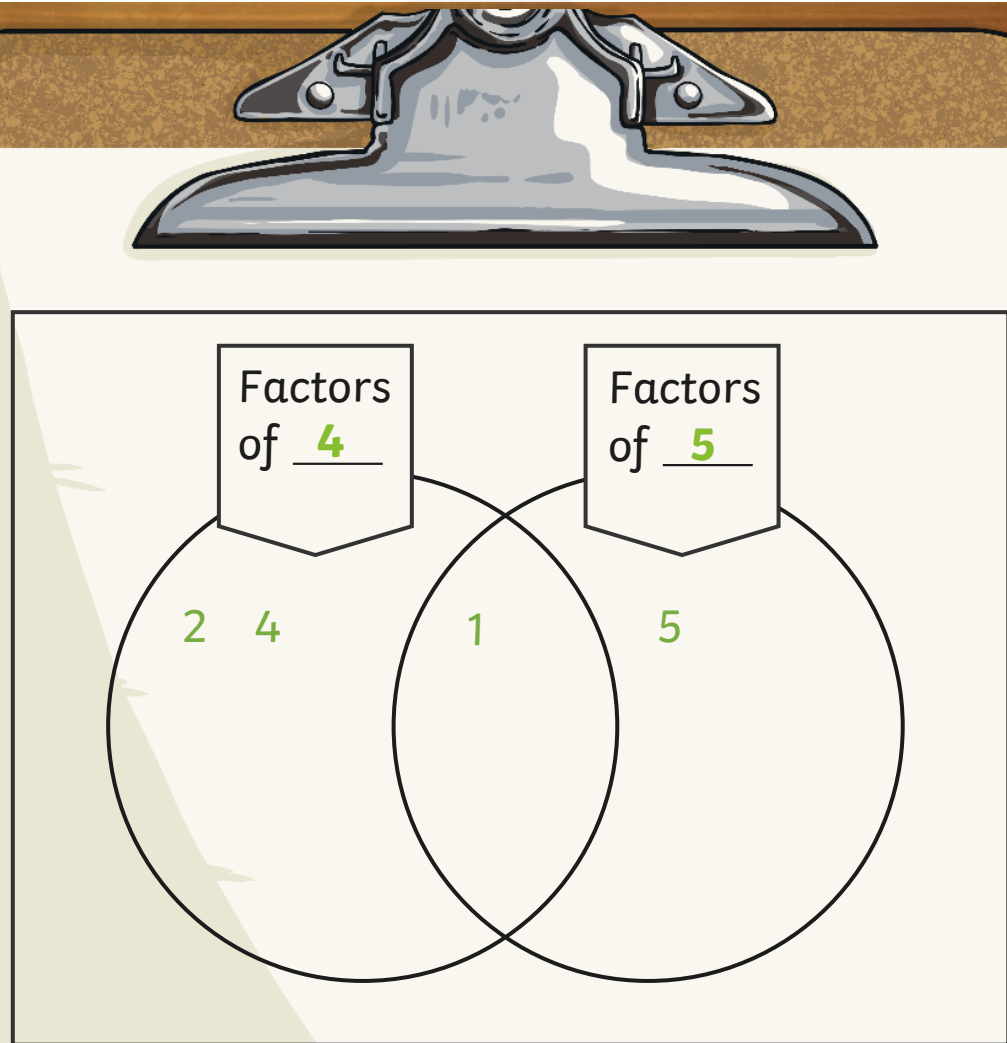
You can make an array that has 3 rows with 2 in each.



Sort the number cards on to the Venn diagram. Decide the sorting criteria using your knowledge of factors.



There are many possible answers. Here is one example.





I am a multiple of 5 and one of my factors is 4.

~~40~~

30

I have four tens and one of my factors is 7.

40

One of my factors is 10.

42

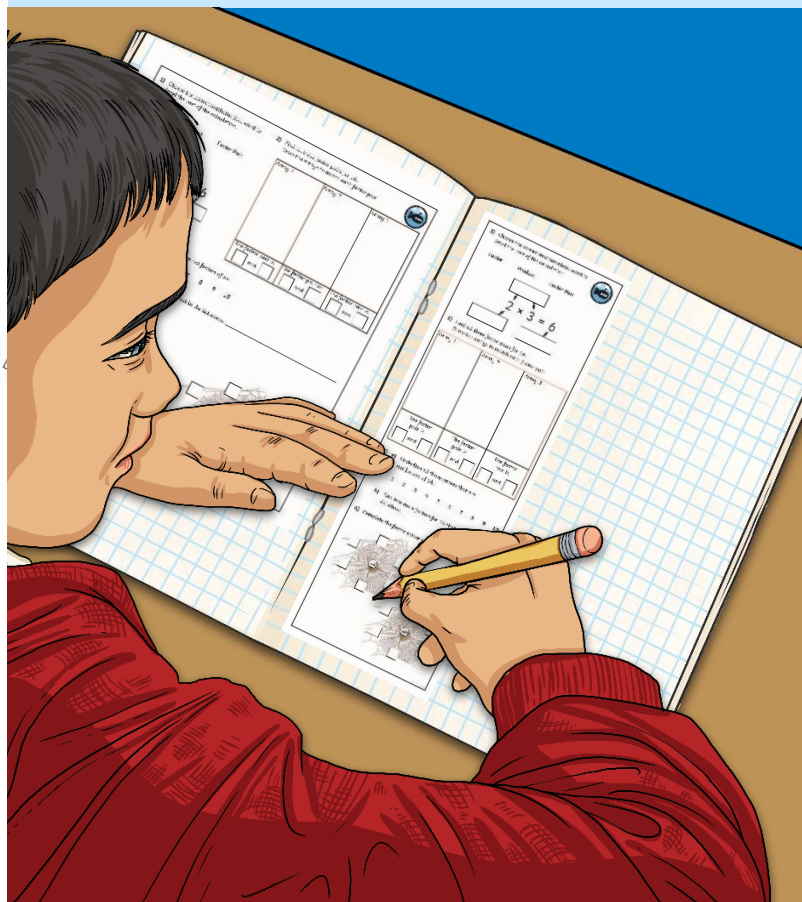
There are three numbers between 25 and 45 that have 8 factors.

Use these clues to identify each number. Then, in the table, list all 8 factors of each number that you have found.

Number	Factor
30	1, 2, 3, 5, 6, 10, 15, 30
40	1, 2, 4, 5, 8, 10, 20, 40
42	1, 2, 3, 6, 7, 14, 21, 42

Factor Pairs

Dive in by completing your own activity!



1) Sort the factors. Explain your answer.

Number factors

1) Read the statement. Explain your answer.

Statement: 1 is a factor of every number.

Explain:

1) Choose the correct mathematical word to label the part of the calculation.

Factor Product Factor Pair

$2 \times 3 = 6$

2) Find all three factor pairs for 16. Draw the arrays to match each factor pair.

Array 1	Array 2	Array 3

The factor pair is: and The factor pair is: and The factor pair is: and

3) a) Underline all the numbers that are not factors of 64.

1 2 3 4 5 6 7 8 9 10

b) Find two more factors for 64 that are not in the list above.

4) Complete the factor spider webs.

The child Who do you like?

You can find that in the book.

18

20