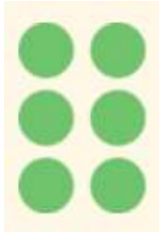


11/02/21

# Maths Tasks – Yellow Challenge

1. a) Which factor pair is represented by this array?



\_\_\_ x \_\_\_

\_\_\_ and \_\_\_ are a factor pair

b) Draw a different array using 6 counters to find the other factor pair.

\_\_\_ x \_\_\_

\_\_\_ and \_\_\_ are a factor pair

2. a) Which factor pair is represented by this array?



\_\_\_ x \_\_\_

\_\_\_ and \_\_\_ are a factor pair

b) Draw a different array using 8 counters to find the other factor pair.

\_\_\_ x \_\_\_

\_\_\_ and \_\_\_ are a factor pair

3. a) Which factor pair is represented by this array?



\_\_\_ x \_\_\_

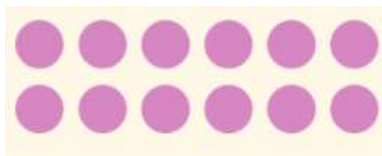
\_\_\_ and \_\_\_ are a factor pair

b) Draw a different array using 10 counters to find the other factor pair.

\_\_\_ x \_\_\_

\_\_\_ and \_\_\_ are a factor pair

4. a) Which factor pair is represented by this array?



\_\_\_ x \_\_\_

\_\_\_ and \_\_\_ are a factor pair

b) Draw two different arrays using 12 counters to find the other factor pairs.

\_\_\_ x \_\_\_

\_\_\_ and \_\_\_ are a factor pair

\_\_\_ x \_\_\_

\_\_\_ and \_\_\_ are a factor pair

c) Now list the factor pairs of 12.

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## Maths Tasks – Blue Challenge

1. a) Draw an array of 20 counters to show that 2 and 10 are factors of 20.      b) Draw a different array of 20 counters to show why 4 and 5 are also factors of 20.

c) List all the factor pairs of 20.

2. a) Draw different arrays of 18 counters to show the factors of 18.

b) List all the factor pairs of 18.

3. a) Draw different arrays of 24 counters to show the factors of 24.

b) List all the factor pairs of 24.

4. True or False? 15 has 6 factors. Prove it by drawing arrays!



5. True or False? 21 has 4 factors. Prove it by drawing arrays!



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# Maths Tasks – Green Challenge

We can identify a factor of a number by finding out whether it is divisible by that number.

1. Which of the numbers can 36 be divided into? Circle the numbers that are factors of 36.

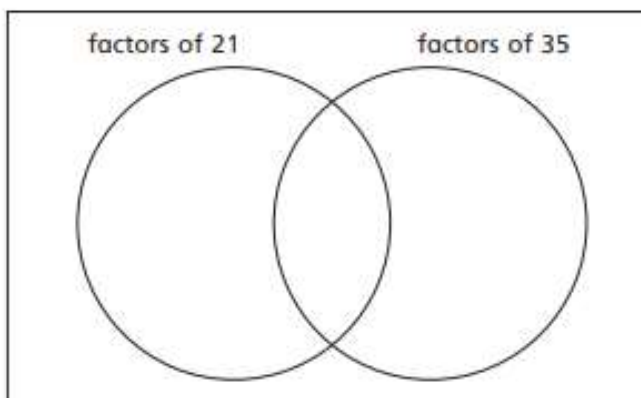
2    5    9    4    10    12    18    3    6    7    13

2. Which of the numbers can 42 be divided into? Circle the numbers that are factors of 42.

4    6    3    8    9    14    18    12    7    21    5

3. a) Write the numbers on the diagram.

1    3    5    7    21    35



- b) What are the common factors of 21 and 35?

- c) How does the Venn diagram help to list the common factors?

4. Complete the sentences. You may want to draw Venn diagrams to help you.

a) The factors of 24 are \_\_\_\_\_

The factors of 36 are \_\_\_\_\_

The common factors of 24 and 36 are \_\_\_\_\_

b) The factors of 30 are \_\_\_\_\_

The factors of 45 are \_\_\_\_\_

The common factors of 30 and 45 are \_\_\_\_\_

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# Maths Tasks – White Challenge

1. Which pairs of numbers have only one common factor?

2 and 6

3 and 8

15 and 12

9 and 11

49 and 21

15 and 22

What do you notice?

2.



I am thinking of two numbers between 70 and 80. The common factors are 1, 2, 4 and 8

What are the two numbers that Teddy is thinking of?

3. Simon is sorting numbers into a Carroll diagram. Finish sorting the remaining numbers.

	Is a factor of 64	Is NOT a factor of 64			
Is a factor of 72		6	12	1	8
Is NOT a factor of 72		11	3	16	9
			4	5	18
			2	7	10

4.

Gabriella is listing common factors of numbers. Circle her mistakes.

**84 and 28**

A. 14 4 8 7

**32 and 64**

B. 16 8 12 4

Add in any missing factors.

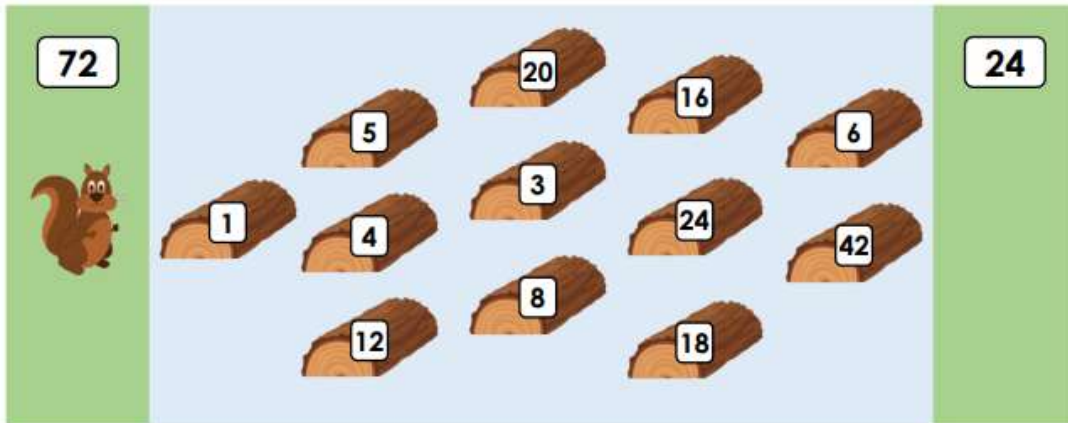
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## Maths Tasks – White+ Extension

Squeak the Squirrel wants to cross the river.

He can only step on the logs which are common factors of the numbers on both banks.

Explore the route Squeak could take. Is there more than one possible route?



I am thinking of 2 numbers less than 100. They have exactly 4 common factors: 1, 2, 5 and 10. What could the numbers be? Give 4 possible pairs of numbers.

I am thinking of 2 numbers less than 100. They have exactly 3 common factors. What could the numbers be? Find 4 possible pairs of numbers, together with their 3 common factors.

Which two numbers less than 50 have the greatest number of common factors? Explore and record your findings.