

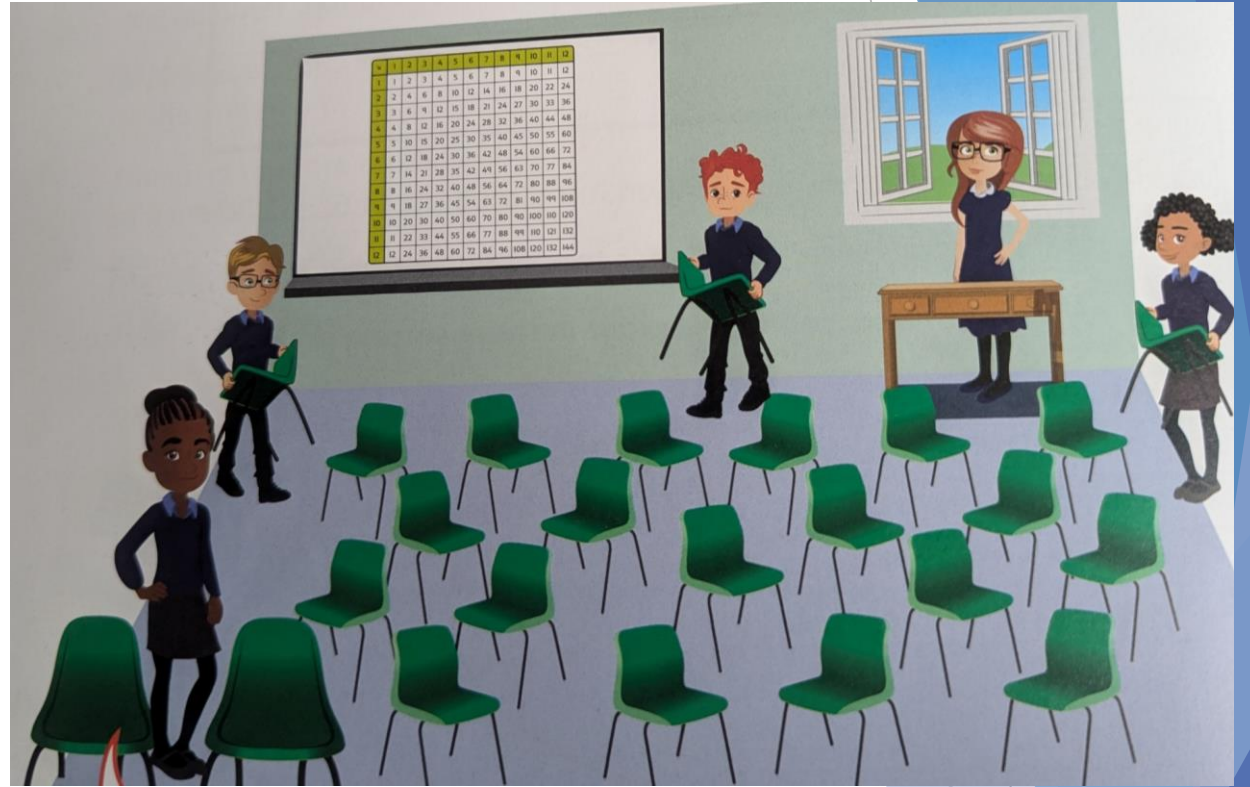
RECALL

Guided practice

- ▶ A factor means a number that goes into (divide) another number without any remainders.
- ▶ For example 3 goes into 6 twice (6 divided by 3 = 2)
- ▶ So three is a factor of 6
- ▶ Is 3 a factor of 4?

Guided practice - My Turn

- ▶ We need to set up these chairs for a meeting. There are 24 chairs and they need to go into equal rows.
- ▶ How many different ways could we do this?
- ▶ I need to find all the factors of 24. I'll start at 1 row and work up from there.



help

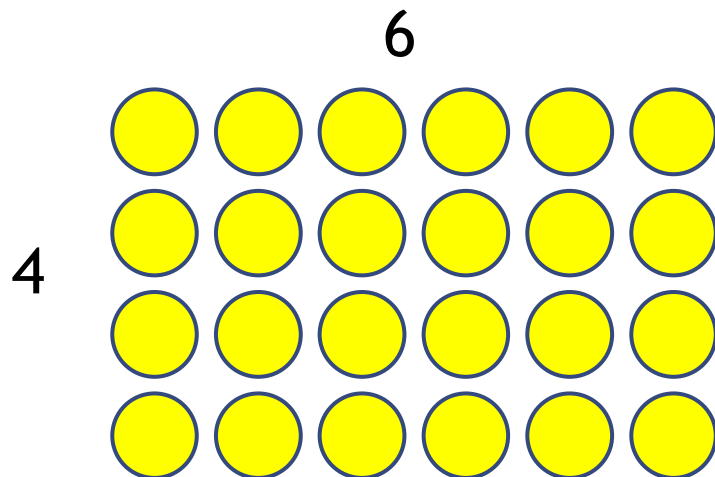
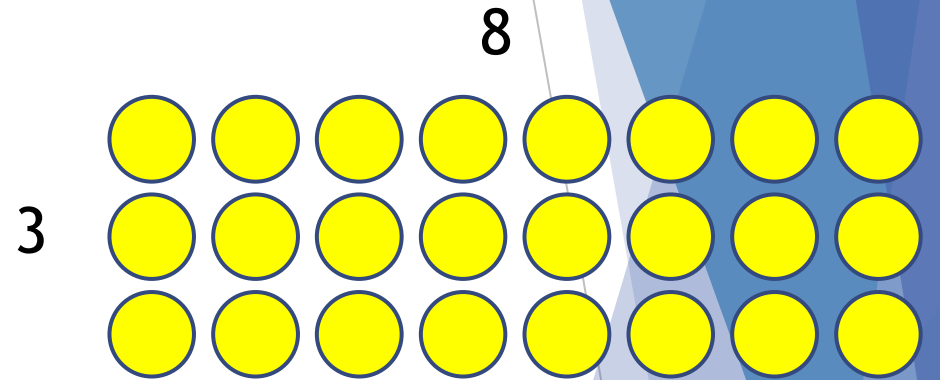
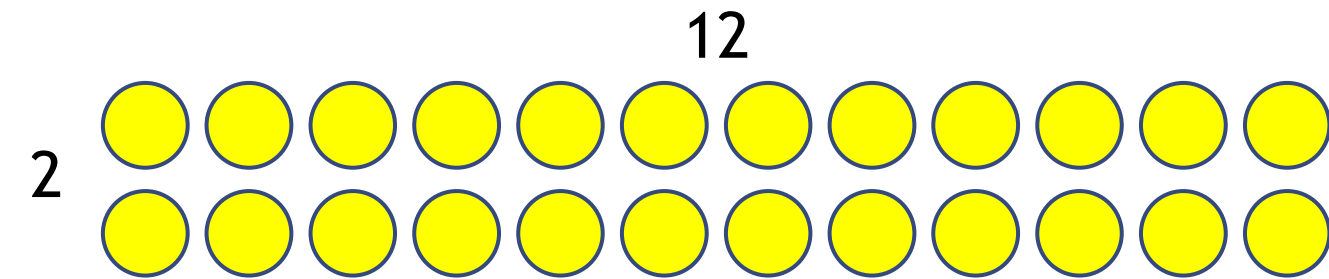
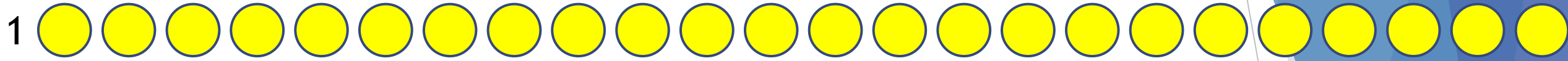
- ▶ Use a times table square and arrays to help you.



- ▶ If we had 25 chairs, would there be more arrangements?

Guided practice - My Turn working out

24



Drawing an array can take a very long time! It is much easier to use your times table skills

$$1 \times 24 = 24$$

$$2 \times 12 = 24$$

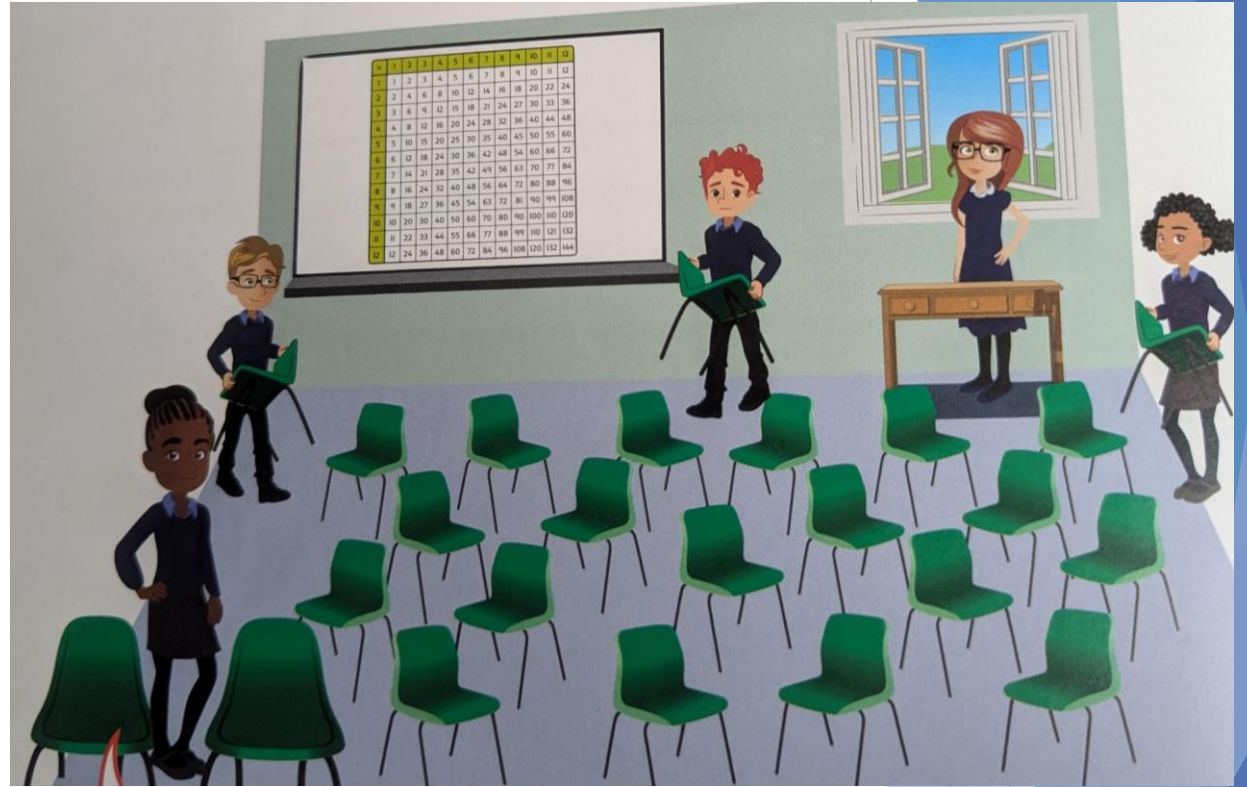
$$3 \times 8 = 24$$

$$4 \times 6 = 24$$

So all the factors of 24 are 1, 2, 3, 4, 6, 8, 12 and 24

Guided practice - Your Turn

- ▶ We need to set up these chairs for a meeting. There are 18 chairs and they need to go into equal rows.
- ▶ How many different ways could we do this?
- ▶ I need to find all the factors of 18. Start at 1 row and work up from there.



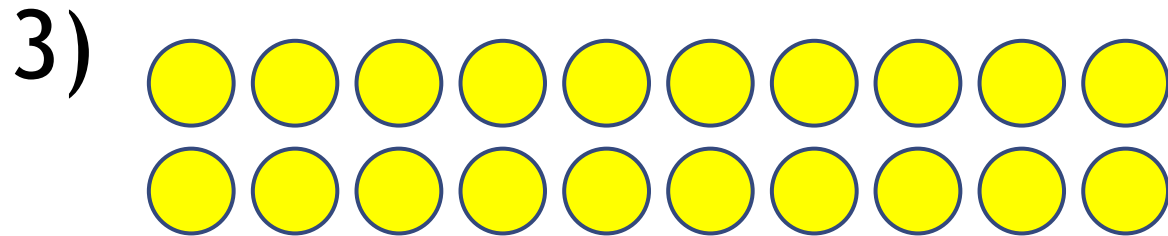
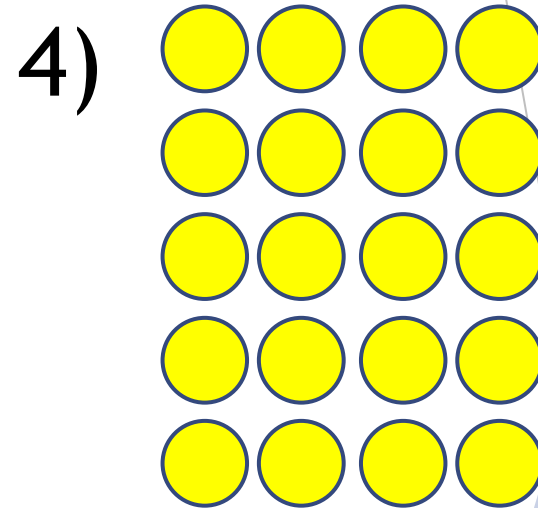
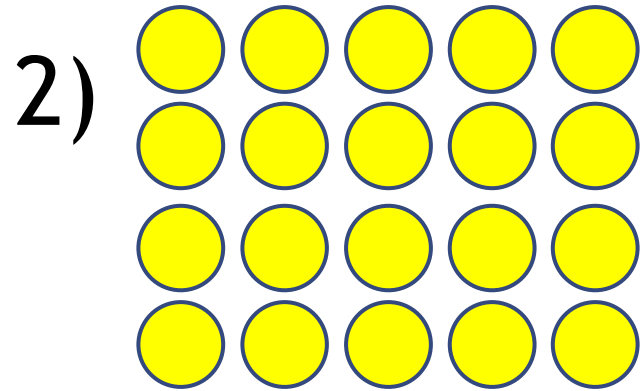
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- ▶ Use a times table square and an arrays to help you

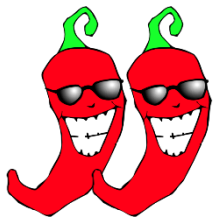


- ▶ If we had 19 chairs, would there be more arrangements?

Write the factors that match the arrays below. You do not need to draw them



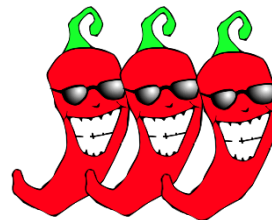
These array display the factors of ____
 The factors of ____ are _____



I have drawn the arrays 1×32

Draw all other possible arrays for 32 using the squares in your book

The factors of 32 are



1a) Which of these numbers are factors of 100?

20 70 40 1 200 10 50 4 5 100 95

1b) There are two factors of 100 missing. What are they?



Kate and Max are holding number cards.

Kate	My number is a factor of your number.	Max	Then my number must be a multiple of your number.
			

Is this always true? Try a few examples and explain what you have found

Dive deeper 1

1

6a. Class 5 have been finding factors.

Polly says,

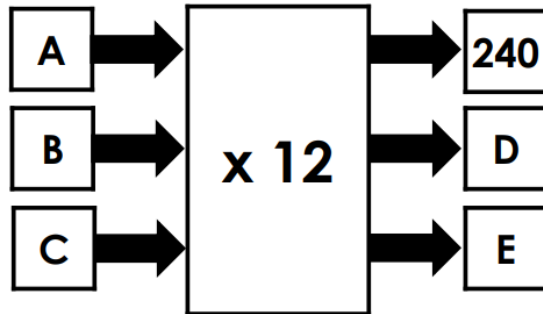


The number 24 has got six different factors.

Is she correct? Prove it.

3

8a. Three factors are put into the machine below. Use the clues to work out what the missing factors and products could be.



B is half of A.

C is an odd number.

E is half of D.

2

a) Which of the numbers are factors of 30?

5 15 25 3 30 4 2 12 60 0

b) These numbers are all factors of a 2-digit number.

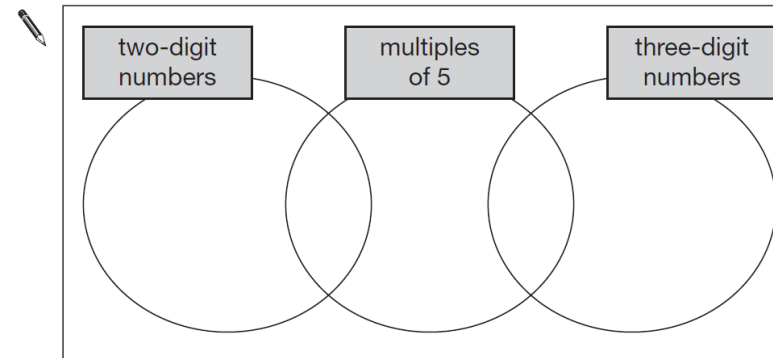


What could the 2-digit number be?

4

Write **each** number in its correct place on the diagram.

2 20 201 2000



Dive deeper 2

1

Tiny has found the factors of 36



1	2	3	4	5	6
36	18	12	9	x	6

Why does Tiny put a cross next to 5?

Why does Tiny stop after 6?



36 has
10 factors.

Do you agree with Tiny?

Explain your answer.



2

Are the statements always, sometimes or never true?



An even number has an even number of factors.

An odd number has an odd number of factors.

If 100 is a factor of a number, then 25 is also a factor of the number.



Is Whitney correct?

Can you replace 25 with another number?

