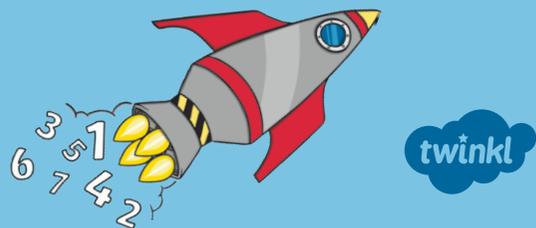


Maths Mastery

Year 2 Count in Steps of 2s, 3s, 5s and 10s Place Value Challenge Cards



Year 2 Count in Steps of 2s, 3s, 5s and 10s Place Value Maths Mastery



An even number of 5s will always make a multiple of 10.

Do you agree?
Can you demonstrate your thinking with equipment?

Year 2 Count in Steps of 2s, 3s, 5s and 10s Place Value Maths Mastery

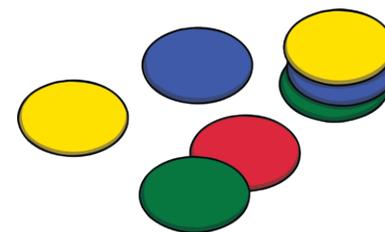
I will only say even numbers when I count in 10s.
Am I correct?

Year 2 Count in Steps of 2s, 3s, 5s and 10s Place Value Maths Mastery

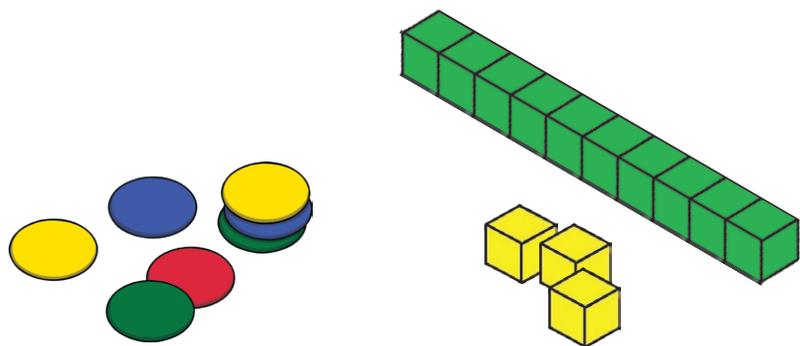
I have 30 counters and I want to put them into equal groups with no leftovers.

Can you predict what groups I can make?

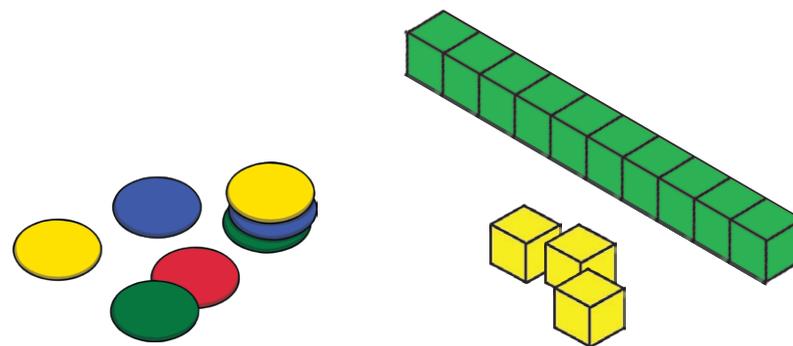
Use counters to see if you have found them all.



Use equipment to compare counting in 5s and counting in 10s. Can you describe what you see?



Use equipment to compare counting in 2s and counting in 3s. Can you describe what you see?



$$1 \times 10 = 10$$

$$4 \times 5 = 20$$

$$2 \times 5 = 10$$

$$3 \times 10 = 30$$

$$2 \times 10 = 20$$

$$6 \times 5 = 30$$

Can you see a pattern?

Can you continue the pattern?

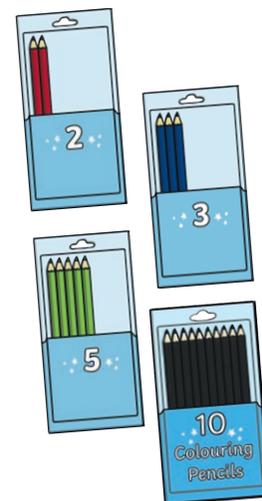
Can you explain the pattern?

Coloured pens come in packets of different sizes.

Ben wants to buy exactly 25 pencils of the same colour. What colour could he buy?

Alice needs 30 pencils of the same colour. What colour could she buy?

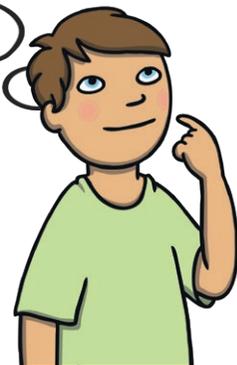
Can you explain why Alice has more choice of colours than Ben?



Why don't the ones change when I count in tens?

Choose a starting number and count in tens.

Can you use equipment to answer Jamal's question?



"1, 3, 5, 7, 9"

Li says she is counting in 2s.

Do you agree? Can you explain your answer?

When I count in multiples of 2 or 10, I always say even numbers. Why do I not say only odd numbers when I count in multiples of 3 or 5?

Can you answer Hamish's question?

Can you show your thinking using equipment?

How could what we have noticed help us with our counting patterns?

Year 2 Count in Steps of 2s, 3s, 5s and 10s Place Value Maths Mastery Answers

1. Yes, because 2 5s go together to make a 10.
2. It depends. If you start with a multiple of 10, every number will be even. However, if you start with an odd number, every number will be odd.
3. Equal groups of 1, 2, 3, 5, 6, 10, 15, 30 can be made.
4. Every other multiple of 5 is also a multiple of 10 because 2 5s make 10.
5. Every other multiple of 3 is also a multiple of 2 because 2 odd numbers make an even number and every multiple of 2 is even.
6. Can you see a pattern?
The tens are going up in ones, the 5s are going up in 2s, but they have the same answer.
Can you explain the pattern?
2 5s make a ten so you need double the number of 5s to make the equivalent number of tens.
7. Ben wants to buy exactly 25 pencils of the same colour. What colour could he buy?
green
Alice needs 30 pencils of the same colour. What colour could she buy?
red, blue, green or black
Can you explain why Alice has more choice of colours than Ben?
30 is a multiple of 2, 3, 5, and 10. 25 is only a multiple of 5.
8. Because of place value, a ten has zero ones. Adding zero to a number does not change the number so the ones don't change.
9. Yes, she is counting in 2s because she is adding 2 each time. She is not counting in multiples of 2 because her starting number wasn't an even number.
10. Can you show your thinking using equipment?
Adding even numbers will always make another even number, but adding odd numbers will alternate as two odd numbers make an even number.
How could what we have noticed help us with our counting patterns?
Knowing this can help us check. If we say an odd number when counting in multiples of an even number, we have made a mistake. If we say 2 evens together or 2 odds together for an odd pattern, we have also made a mistake.