

Reasoning and Problem Solving

Step 6: Use Arrays

National Curriculum Objectives:

Mathematics Year 2: (2C6) [Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers](#)

Mathematics Year 2: (2C7) [Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication \(\$\times\$ \), division \(\$\div\$ \) and equals \(=\) signs](#)

Mathematics Year 2: (2C8) [Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts](#)

Mathematics Year 2: (2C9b) [Show that multiplication of two numbers can be done in any order \(commutative\) and division of one number by another cannot](#)

Differentiation:

Questions 1, 4 and 7 (Problem Solving)

Developing Work out the n^{th} array (up to $5 \times$) in a timetable (2, 5 or 10) by continuing the pattern.

Expected Work out the n^{th} array (up to $10 \times$) in a timetable (2, 5 or 10) by continuing the pattern.

Greater Depth Work out the n^{th} array (up to $10 \times$) in a timetable (2, 4, 5, or 10) by continuing the pattern.

Questions 2, 5 and 8 (Reasoning)

Developing State which is the odd one out by comparing the given arrays. Using 2 & 10s.

Expected State which is the odd one out by comparing the given arrays. Using 2, 5 & 10s.

Greater Depth State which is the odd one out by comparing the given arrays. Using 2, 4, 5, & 10s.

Questions 3, 6 and 9 (Reasoning)

Developing Explain whether the character has shown the correct array. Using 2 & 10s.

Expected Explain whether the character has shown the correct array. Using 2, 5, & 10s.

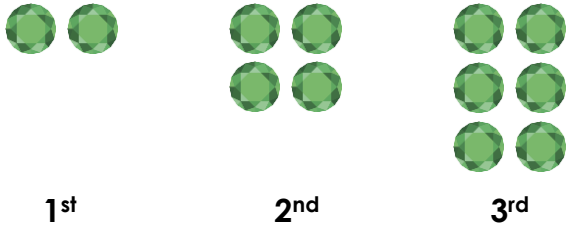
Greater Depth Explain whether the character has shown the correct array. Using 2, 4, 5, & 10s.

[More resources](#) which follow the same small steps as White Rose.

Did you like this resource? Don't forget to [review](#) it on our website.

Use Arrays

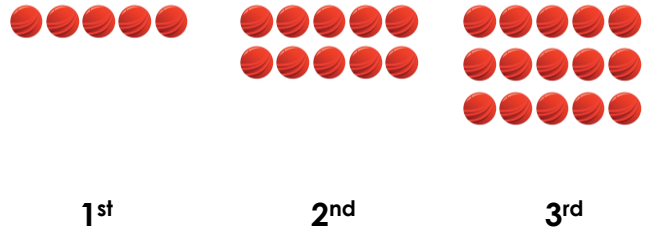
1a. Niall is using jewels to make arrays for the 2 times table. How many jewels will he need for the 5th array?



PS

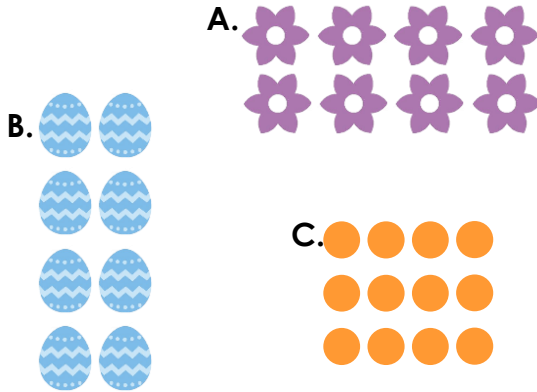
Use Arrays

1b. Morris is using marbles to make arrays for the 5 times table. How many marbles will he need for the 4th array?



PS

2a. Which is the odd one out?

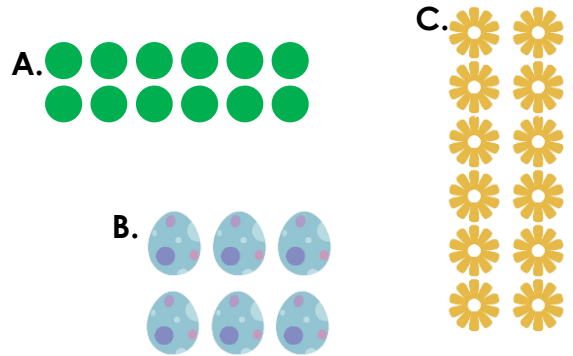


Explain your answer.



R

2b. Which is the odd one out?



Explain your answer.

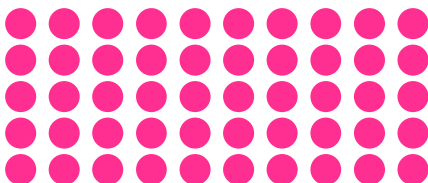


R

3a. Chris is making arrays. He says,



My array shows 4 lots of 10.



Is he correct? Explain your answer.



R

3b. Jada is making arrays. She says,



My array shows 2 lots of 5.



Is she correct? Explain your answer.



R

Use Arrays

4a. Lucille is using marbles to make arrays for the 2 times table. How many marbles will she need for the 6th array?



1st



2nd



3rd



PS

Use Arrays

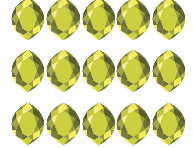
4b. Gerry is using jewels to make arrays for the 5 times table. How many jewels will he need for the 8th array?



1st



2nd

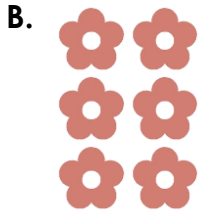
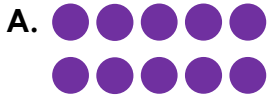


3rd



PS

5a. Which is the odd one out?

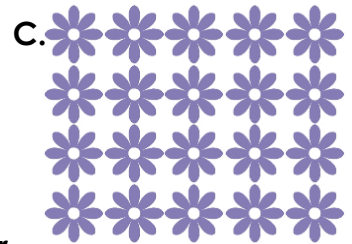
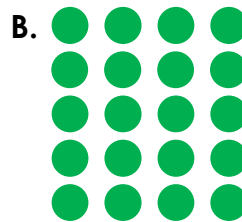


Explain your answer.



R

5b. Which is the odd one out?



Explain your answer.

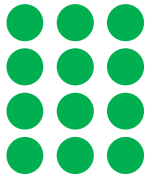


R

6a. Sam is making arrays. He says,



My array shows 5 lots of 3.



Is he correct? Explain your answer.

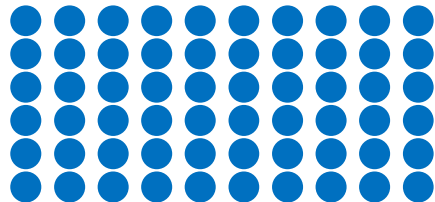


R

6b. Kaylee is making arrays. She says,



My array shows 7 lots of 10.



Is she correct? Explain your answer.



R

Use Arrays

7a. Clara is using jewels to make arrays for the 5 times table. How many jewels will she need for the 9th array?



1st



2nd



3rd



PS

Use Arrays

7b. Bobby is using marbles to make arrays for the 4 times table. How many marbles will he need for the 7th array?



1st



2nd

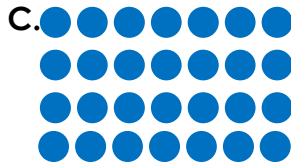
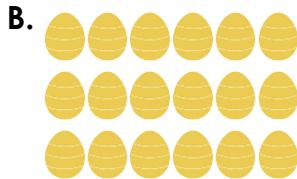


3rd



PS

8a. Which is the odd one out?

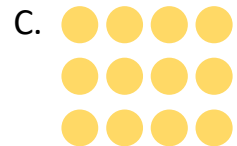
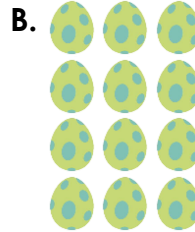
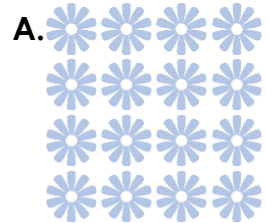


Explain your answer.



R

8b. Which is the odd one out?



Explain your answer.

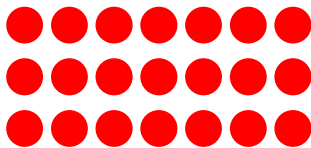


R

9a. Nyah is making arrays. She says,



My array shows 4 lots of 8.



Is she correct? Explain your answer.

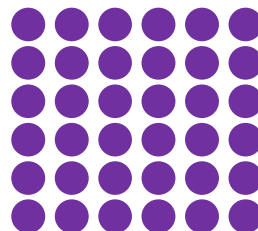


R

9b. Malakhi is making arrays. He says,



My array shows 5 lots of 6.



Is he correct? Explain your answer.



R

Reasoning and Problem Solving Use Arrays

Developing

- 1a. 10 jewels
2a. C is the odd one out as it shows 3×4 .
A & B show 2×4 and 4×2 .
3a. Chris is incorrect as the array shows 5 lots of 10 (5×10), not 4 lots of 10.

Expected

- 4a. 12 marbles
5a. B is the odd one out as it shows 3×2 .
A & C show 2×5 and 5×2 .
6a. Sam is incorrect as the array shows 4 lots of 3 (4×3), not 5 lots of 3.

Greater Depth

- 7a. 45 jewels
8a. C is the odd one out as it shows 4×7 .
A & B show 6×3 and 3×6 .
9a. Nyah is incorrect as the array shows 3 lots of 7 (3×7), not 4 lots of 8.

Reasoning and Problem Solving Use Arrays

Developing

- 1b. 20 marbles
2b. B is the odd one out as it shows 2×3 .
A & C show 2×6 and 6×2 .
3b. Jada is incorrect as the array shows 2 lots of 4 (2×4), not 2 lots of 5.

Expected

- 4b. 40 jewels
5b. A is the odd one out as it shows 2×4 .
B & C show 5×4 and 4×5 .
6b. Kaylee is incorrect as the array shows 6 lots of 10 (6×10), not 7 lots of 10.

Greater Depth

- 7b. 28 marbles
8b. A is the odd one out as it shows 4×4 .
B & C show 4×3 and 3×4 .
9b. Malakhi is incorrect as the array shows 6 lots of 6 (6×6), not 5 lots of 6.