Reasoning and Problem Solving
Step 4: The 3 Times Table

National Curriculum Objectives:

Mathematics Year 3: (3C6) Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables

Mathematics Year 3: (3C7) Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods

Mathematics Year 3: (3C8) Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which *n* objects are connected to *m* objects

Differentiation:

Questions 1, 4 and 7 (Problem Solving)
Developing Solve the clues to find the number using multiples of 3, up to 12 x 3. Pictorial support to aid counting in 3s.
Expected Solve the clues to find the number using multiples of 3, up to 12 x 3. No pictorial support.
Greater Depth Solve the clues to find the number using multiples of 3, up to 12 x 3 using a mixture of numerals and words. No pictorial support.

Questions 2, 5 and 8 (Reasoning)
Developing Explain what the nth shape in a pattern of 3 would be, using multiples of 3 up to 12 x 3. Pictorial support given.
Expected Explain what the nth shape in a pattern of 3 would be, using multiples of 3 up to 12 x 3. Some pictorial support given.
Greater Depth Explain what the nth shape in a pattern of 3 would be, using multiples of 3 up to 12 x 3 with numerals and words. No scaffolding or pictorial support.

Questions 3, 6 and 9 (Problem Solving)
Developing Solve a one-step word problem using knowledge of 3 times table, up to x12. Pictorial support given.
Expected Solve a one-step word problem using knowledge of 3 times table, up to x12. Some pictorial support given.
Greater Depth Solve a one-step word problem using knowledge of 3 times table, up to x12. No scaffolding or pictorial support.

More Year 3 Multiplication and Division resources.

Did you like this resource? Don't forget to review it on our website.

The 3 Times Table

The 3 Times Table

1a. Use the clues to work out the number.

> My number is in the 3 times table.

> It is more than 10 and less than 20.

> If I count in 5s I will say my number.

D 3 3 3 3 3 3 3 3 3 3 3 3 PS

1b. Use the clues to work out the number.

> My number is in the 3 times table.

> It is more than 20 and less than 36.

> If I count in 10s I will say my number.

D 3 3 3 3 3 3 3 3 3 3 3 3 PS

2a. Clare has started to draw a pattern.

Draw the next 3 shapes in her pattern.

> The 9th shape in my pattern will be a square.

Is she correct?
Explain your answer.

D R

2b. Harees has started to draw a pattern.

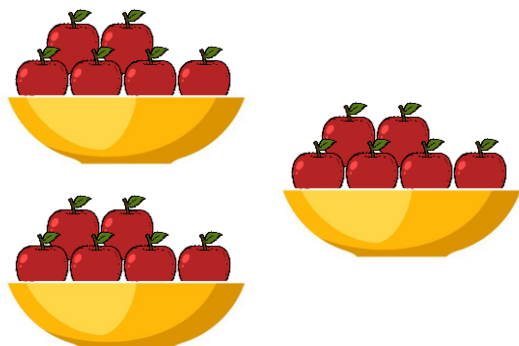Draw the next 3 shapes in his pattern.

> The 7th shape in my pattern will be a circle.

Is he correct?
Explain your answer.

D R

3a. There are 6 apples in a bowl. How many apples would there be in 3 bowls?

Write the number sentence to show how you worked this out.

D PS

3b. There are 8 petals on a flower. How many petals would there be on 3 flowers?

Write the number sentence to show how you worked this out.

D PS

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The 3 Times Table

The 3 Times Table

4a. Use the clues to work out the number.

My number can be divided into 3 equal groups.

It is less than 30 but more than 20.

The sum of its digits is 6.

E · PS

4b. Use the clues to work out the number.

My number is a multiple of 3.

It is less than 15.

It is a 2-digit number.

E · PS

5a. Blake has drawn a pattern.

The 11th shape in my pattern will be a triangle.

Is he correct?
Explain your answer.

E · R
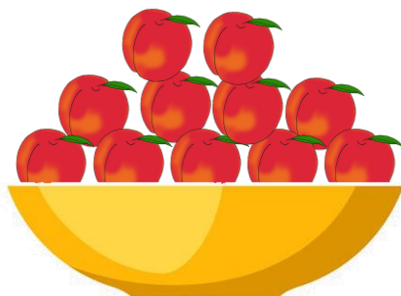
5b. Alina has drawn a pattern.

Every 4th shape will be a square.

Is she correct?
Explain your answer.

E · R

6a. There are 11 peaches in a bowl. How many peaches would there be in 3 bowls?

Write the number sentence to show how you worked this out.

E · PS

6b. There are 12 eggs in a carton. How many eggs would there be in 3 cartons?

Write the number sentence to show how you worked this out.

E · PS

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Reasoning and Problem Solving – The 3 Times Table – Year 3 Expected

The 3 Times Table

7a. Use the clues to work out the number.

> When I divide my number by 3, I get an odd number.

> The sum of its digits is more than five.

> My number is a multiple of 5 and is less than 30.

GD

PS

7b. Use the clues to work out the number.

> My number is an even multiple of three and is less than forty.

> The tens digit is smaller than the ones digit.

> My ones digit is the same as 2 x 3.

GD

PS

8a. Judy is planning a pattern. She writes down what shapes she will use.

> circle, circle, square, circle, circle, square

> The sixth shape in my pattern is a square, so the 10th and 15th shapes will also be squares.

Is she correct?
Explain your answer.

GD

R

8b. Trent is planning a pattern. He writes down what shapes he will use.

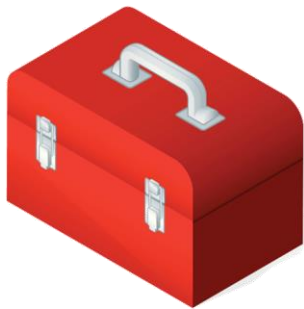> star, star, triangle, star, star, triangle

> If I count in fives I will know which shapes will be triangles.

Is he correct?
Explain your answer.

GD

R

9a. There are 9 tools in a toolbox. How many tools would there be in 3 toolboxes?

Write the number sentence to show how you worked this out.

GD

PS

9b. There are 7 books on a shelf. How many books would there be on 3 shelves?

Write the number sentence to show how you worked this out.

GD

PS

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Reasoning and Problem Solving – The 3 Times Table – Year 3 Greater Depth

Reasoning and Problem Solving
The 3 Times Table

Developing

1a. 15

2a. Square, square, triangle. No, she is not correct because every 3rd shape is a triangle.

3a. There would be 18 apples in 3 bowls. (6 x 3 = 18)

Expected

4a. 24

5a. No, he is not correct because only multiples of 3 are triangles. The 11th shape in the pattern will be a circle because 11 is not a multiple of 3.

6a. There would be 11 peaches in 3 bowls. (11 x 3 = 33)

Greater Depth

7a. 15

8a. No, she is not correct because only multiples of 3 will be squares. 10 is not a multiple of 3 so it will be a circle. 15 is a multiple of 3 so it will be a square.

9a. There would be 27 tools in 3 toolboxes. (9 x 3 = 27)

Reasoning and Problem Solving
The 3 Times Table

Developing

1b. 30

2b. Circle, circle, square. Yes, he is correct because every 3rd shape is a square which means that the 7th shape will be a circle.

3b. There would be 24 petals on 3 flowers. (8 x 3 = 24)

Expected

4b. 12

5b. No, she is not correct because every 3rd shape is a circle. 3 x 4 = 12, so the 12th shape would be a circle.

6b. There would be 36 eggs in 3 cartons. (12 x 3 = 36)

Greater Depth

7b. 36

8b. No, he is not correct because he needs to count in 3s to know which shapes will be triangles.

9b. There would be 21 books on 3 shelves. (7 x 3 = 21)

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Reasoning and Problem Solving – The 3 Times Table ANSWERS