Reasoning and Problem Solving
Step 2: Multiply by 3

National Curriculum Objectives:

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

Differentiation:

Questions 1, 4 and 7 (Reasoning)
Developing Prove how many of an object there are altogether using knowledge of counting in 3s in order to multiply by 3 (up to 12 groups of 3). All questions have pictorial support where each digit is represented.
Expected Prove how many of an object there are altogether using knowledge of counting in 3s in order to multiply by 3 (up to 12 groups of 3). Where only one group of 3 is represented pictorially.
Greater Depth Prove how many of an object there are altogether using knowledge of counting in 3s in order to multiply by 3 beyond 12 groups of 3 using their knowledge of the times tables facts up to 12 groups of 3. No pictorial support provided with numbers presented as words.

Questions 2, 5 and 8 (Reasoning)
Developing Explain whether a statement is correct. Using counting in 3s in order to multiply by 3 (up to 12 groups of 3). All questions have pictorial support where each digit is represented.
Expected Explain whether a statement is correct. Using counting in 3s in order to multiply by 3 (up to 12 groups of 3). Where only one group of 3 is represented pictorially.
Greater Depth Explain whether a statement is correct. Using counting in 3s in order to multiply by 3 beyond 12 groups of 3 using their knowledge of the times tables facts up to 12 groups of 3. No pictorial support provided with numbers presented as words.

Questions 3, 6 and 9 (Problem Solving)
Developing Suggest an unknown number from the given clues. Using counting in 3s in order to multiply by 3 (up to 12 groups of 3). All questions have pictorial support where each digit is represented.
Expected Suggest an unknown number from the given clues. Using counting in 3s in order to multiply by 3 (up to 12 groups of 3). Where only one group of 3 is represented pictorially.
Greater Depth Suggest an unknown number from the given clues. Using counting in 3s in order to multiply by 3 beyond 12 groups of 3 using their knowledge of the times tables facts up to 12 groups of 3. No pictorial support provided with numbers presented as words.

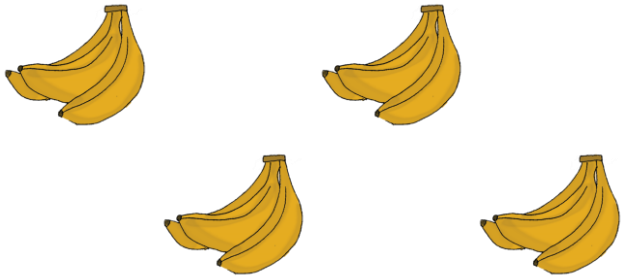
More Year 3 Multiplication and Division resources.

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

Multiply by 3

1a. Rosie has 4 bunches of bananas.

Each bunch contains 3 bananas.



How many bananas are there altogether? Prove it.

D

R

Multiply by 3

1b. Laura has 6 jars of marbles.

Each jar contains 3 marbles.

How many marbles are there altogether. Prove it.

D

R

2a. Wendy has 3 packs of 7 balloons.

There are 20 children at the disco.

Wendy says,

I can give every child a balloon.

Is she correct? Explain how you know.

D

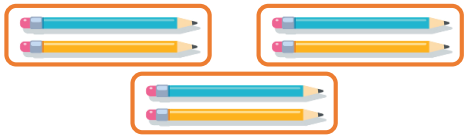
R

2b. Lin has 3 packets of 2 pencils.

There are 6 children who need a pencil.

Lin says,

I don't have enough pencils for every child.



Is she correct? Explain how you know.

D

R

3a. Stanley is thinking of a number.

When he multiplies the number by 3, the answer is less than 10 but more than 6.

What number is Stanley thinking of?

D

PS

3b. Becky is thinking of a number.

When she multiplies the number by 3, the answer is less than 18 but more than 13.

What number is Becky thinking of?

D

PS

Multiply by 3

4a. Jane has 5 packs of pencils.

Each pack contains 3 pencils.

How many pencils are there altogether? Prove it.

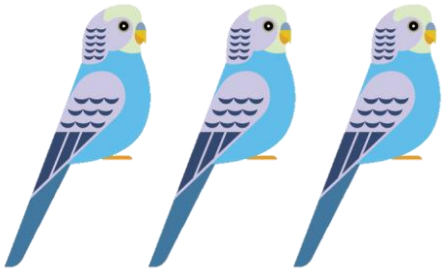
E

R

Multiply by 3

4b. Robert has 6 bird cages.

Each cage contains 3 birds.



How many birds are there altogether. Prove it.

E

R

5a. Henry has 3 packs of 6 cupcakes.

There are 15 friends coming to his party.

Henry says,

I have enough cupcakes for every friend to have one.

Is he correct? Explain how you know.

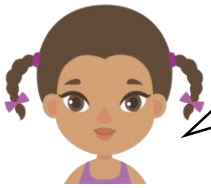
E

R

5b. Eden has 3 bags with 7 sports kits in.

There are 21 children who need a kit.

Eden says,



I don't have enough kits for every child.

Is she correct? Explain how you know.

E

R

6a. Hannah is thinking of a number.

When she multiplies the number by 3, the answer is less than 24 but more than 20.

What number is Hannah thinking of?

3 3 3 3 3 3 3

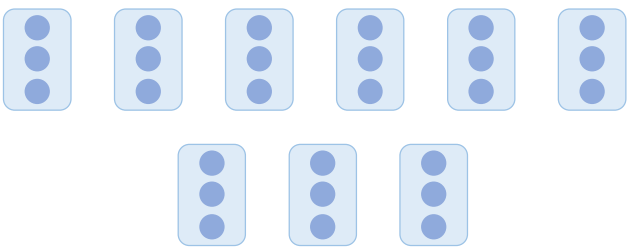
E

PS

6b. Finley is thinking of a number.

When he multiplies the number by 3, the answer is less than 30 but more than 25.

What number is Finley thinking of?



E

PS

Multiply by 3

7a. Lucy has twelve packs of doughnuts.

Each pack contains 3 doughnuts.

How many doughnuts are there altogether? Prove it.

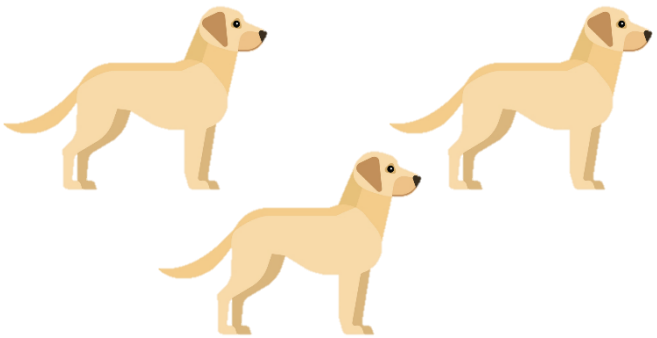
GD

R

Multiply by 3

7b. Freddy has nine kennels.

Each kennel contains three dogs.



How many dogs are there altogether. Prove it.

GD

R

8a. Ali has three bags of seven biscuits.

He has twenty friends coming for a picnic.

Ali says,

I don't have enough biscuits for every friend to have one.

Is he correct? Explain how you know.

GD

R

8b. Elsie has eleven packs of three pens.

There are thirty-five children in her class.

Elsie says,

I have enough pens to give every child in my class one each.

Is she correct? Explain how you know.

GD

R

9a. Grace is thinking of a number.

When she multiplies the number by three, the answer is less than thirty but more than twenty.

When multiplied by three, the answer has a digit sum of nine.

What number is Grace thinking of?

GD

PS

9b. Nick is thinking of a number.

When he multiplies the number by three, the answer is less than twenty-five but more than ten.

When multiplied by three, the answer has a digit sum of three.

What number is Nick thinking of?

GD

PS

Reasoning and Problem Solving
Multiply by 3

Developing

1a. 12 bananas because 3 + 3 + 3 + 3 = 12.

2a. Wendy is correct because 3 x 7 = 21 so there will be 1 balloon left over.

3a. 3

Expected

4a. 15 pencils because 5 x 3 = 15.

5a. Henry is correct because 3 x 6 = 18 so there will be 3 cupcakes left over.

6a. 7

Greater Depth

7a. 36 doughnuts because 12 x 3 = 36.

8a. Ali is incorrect because 3 x 7 = 21 so he has one biscuit left over.

9a. 9

Reasoning and Problem Solving
Multiply by 3

Developing

1b. 18 marbles because 3 + 3 + 3 + 3 + 3 + 3 = 18.

2b. Nicola is incorrect because 3 x 2 = 6 so she will have enough pens for everyone.

3b. 5

Expected

4b. 18 birds because 6 x 3 = 18.

5b. Stephanie is incorrect because 3 x 7 = 21 so she has enough kits for everyone.

6b. 9

Greater Depth

7b. 27 dogs because 9 x 3 = 27.

8b. Elsie is incorrect because 11 x 3 = 33 so she doesn't have enough pens for everyone in her class.

9b. 4 or 7