Reasoning and Problem Solving
Step 11: Find Three Quarters

National Curriculum Objectives:

Mathematics Year 2: (2F1a) Recognise, find, name and write fractions 1/3 , 1/4 , 2/4 and 3/4 of a length, shape, set of objects or quantity

Differentiation:

Questions 1, 4 and 7 (Reasoning)
Developing Explain if the statement is correct. Including quantities and using dividing lines to show the quarters.
Expected Explain if the statement is correct including quantities arranged in arrays.
Greater Depth Explain if the statement is correct. No quantities or scaffolding provided.

Questions 2, 5 and 8 (Reasoning)
Developing Identify three quarters and the total when given a quarter of the quantity. Including quantities and using hoops to show the quarters.
Expected Identify three quarters and the total when given a quarter of the quantity. Quantities arranged in an array.
Greater Depth Identify three quarters and the total when given a quarter of the quantity within a mixed group of objects, arranged randomly.

Questions 3, 6 and 9 (Problem Solving)
Developing Solve a word problem to find the total when given one quarter of the quantity. Image of one quarter shown and dividing lines.
Expected Solve a word problem to find the total when given one quarter of the quantity. Image of one quarter shown.
Greater Depth Solve a word problem to find the total when given one quarter of the quantity. No images or scaffolding provided.

More Year 2 Fractions resources.

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

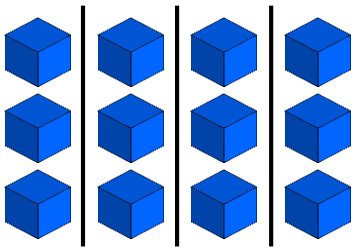
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Find Three Quarters

1a. Hannah says,



$\frac{3}{4}$ of 12 is 9.



Is Hannah correct? Prove it.

D

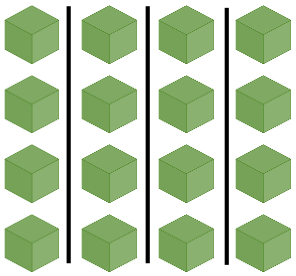
R

Find Three Quarters

1b. Matt says,



$\frac{3}{4}$ of 16 is 8.



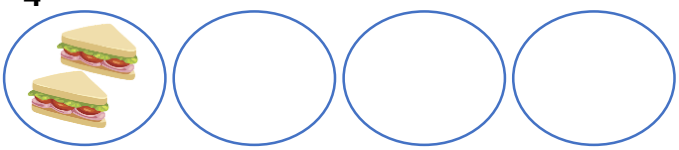
Is Matt correct? Prove it.

D

R

2a. Ted makes some sandwiches.

$\frac{1}{4}$ of them are shown below.



Circle the number of sandwiches that Ted makes altogether.

3 6 8

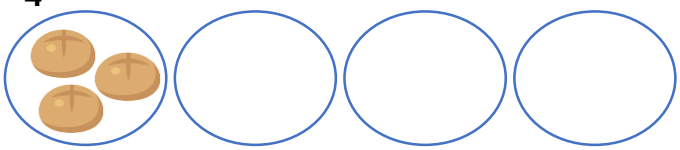
How do you know?

D

R

2b. Megan bakes some bread rolls.

$\frac{1}{4}$ of them are shown below.



Circle the number of bread rolls that Megan bakes altogether.

4 12 9

How do you know?

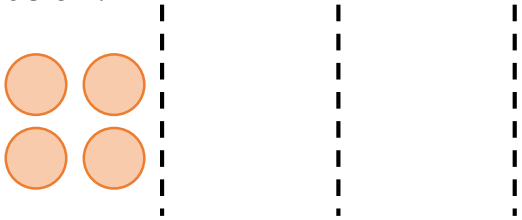
D

R

3a. Solve the word problem below.

Sam is thinking of a number.

One quarter of his number is shown below.



What is Sam's number?

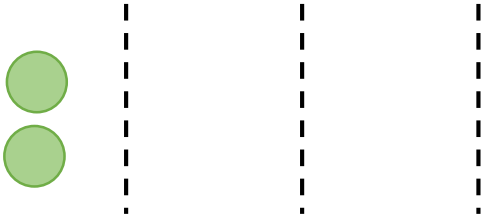
D

PS

3b. Solve the word problem below.

Jen is thinking of a number.

One quarter of her number is shown below.



What is Jen's number?

D

PS

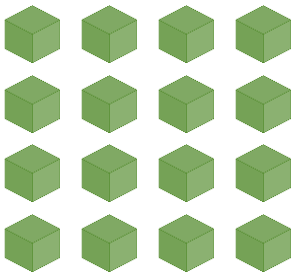
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Find Three Quarters

4a. Sam says,



$\frac{3}{4}$ of 16 is 10.



Is Sam correct? Prove it.

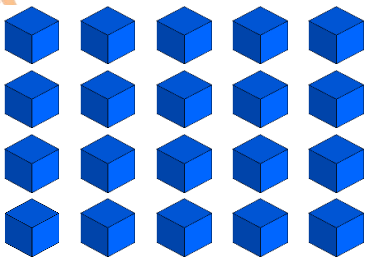
R

Find Three Quarters

4b. Hattie says,



$\frac{3}{4}$ of 20 is 5.



Is Hattie correct? Prove it.

E

R

5a. Isra collects some shells.

$\frac{1}{4}$ of them are shown below.



Circle the number of shells that Isra collects altogether.

20 12 15

How do you know?

R

5b. Adam collects dinosaurs.

$\frac{1}{4}$ of them are shown below.



Circle the number of dinosaurs that Adam collects altogether.

9 12 10

How do you know?

E

R

6a. Solve the word problem below.

Azzam is thinking of a number.

One quarter of his number is shown below.



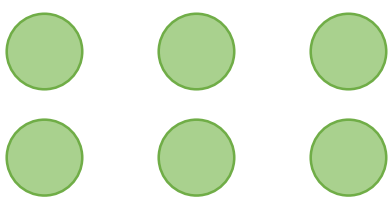
What is Azzam's number?

PS

6b. Solve the word problem below.

Molly is thinking of a number.

One quarter of her number is shown below.



What is Molly's number?

E

PS

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Find Three Quarters

7a. Fatimah says,



$\frac{3}{4}$ of 24 is 16.

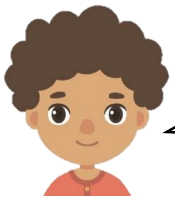
Is Fatimah correct? Prove it.

GD

R

Find Three Quarters

7b. Ewan says,



$\frac{3}{4}$ of 16 is 9.

Is Ewan correct? Prove it.

GD

R

8a. Josie collects marbles and toy cars.

$\frac{1}{4}$ of them are shown below.



Circle the number of marbles that Josie has altogether.

36 24 12

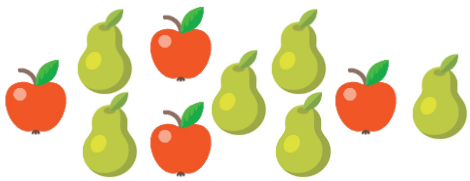
How do you know?

GD

R

8b. Tim is buying apples and pears.

$\frac{1}{4}$ of them are shown below.



Circle the number of pears that Tim has altogether.

24 40 20

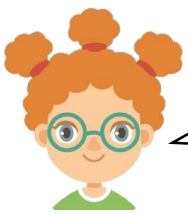
How do you know?

GD

R

9a. Solve the word problem below.

Betsy is thinking of a number.



One quarter of my number is 4.

What is Betsy's number?

GD

PS

9b. Solve the word problem below.

Will is thinking of a number.



One quarter of my number is 7.

What is Will's number?

GD

PS

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Reasoning and Problem Solving
Find Three Quarters

Developing

1a. Hannah is correct because one quarter of 12 is 3 so three quarters is 3 + 3 + 3 which equals 9.

2a. 8 sandwiches in total. One quarter is 2 and three quarters is 2 + 2 + 2 = 6. 2 + 6 = 8

3a. The number is 16.

Expected

4a. Sam is incorrect because one quarter of 16 is 4 so three quarters is 4 + 4 + 4 = 12.

5a. 20 shells in total. One quarter is 5 and three quarters is 5 + 5 + 5 = 15. 5 + 15 = 20.

6a. 12

Greater Depth

7a. Fatimah is incorrect because one quarter of 24 is 6 so three quarters is 6 + 6 + 6 = 18.

8a. 12 marbles in total. One quarter is 3 and three quarters is 3 + 3 + 3 = 9. 3 + 9 = 12.

9a. 16

Reasoning and Problem Solving
Find Three Quarters

Developing

1b. Matt is incorrect because one quarter of 16 is 4 so three quarters is 4 + 4 + 4 which equals 12.

2b. 12 bread rolls in total. One quarter is 3 and three quarters is 3 + 3 + 3 = 9. 3 + 9 = 12

3b. 8

Expected

4b. Hattie is incorrect because one quarter of 20 is 5 so three quarters is 5 + 5 + 5 = 15.

5b. 12 dinosaurs in total. One quarter is 3 and three quarters is 3 + 3 + 3 = 9. 3 + 9 = 12.

6b. 24

Greater Depth

7b. Ewan is incorrect because one quarter of 16 is 4 so three quarters is 4 + 4 + 4 = 12.

8b. 24 pears in total. One quarter is 6 and three quarters is 6 + 6 + 6 = 18. 6 + 18 = 24.

9b. 28

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