

Reasoning and Problem Solving

Step 7: Find a Third

National Curriculum Objectives:

Mathematics Year 2: (2F1a) [Recognise, find, name and write fractions \$\frac{1}{3}\$, \$\frac{1}{4}\$, \$\frac{2}{4}\$ and \$\frac{3}{4}\$ of a length, shape, set of objects or quantity](#)

Mathematics Year 2: (2F1b) [Write simple fractions for example, \$\frac{1}{2}\$ of \$6 = 3\$](#)

Differentiation:

Questions 1, 4 and 7 (Problem Solving)

Developing Solve a word problem to find one third. Images given in arrays.

Expected Solve a word problem to find one third. Images given to support.

Greater Depth Solve a two-step word problem to find one third. No images given.

Questions 2, 5 and 8 (Problem Solving)

Developing Using all of the digit cards, complete the 2 equations to find one third of a whole number.

Expected Using some of the digit cards, complete the 2 equations to find one third of a whole number.

Greater Depth Using some of the digit cards, complete the 3 equations to find one third of a whole number.

Questions 3, 6 and 9 (Reasoning)

Developing Explain whether a given statement about finding one third of a whole number is correct. Images given in arrays.

Expected Explain whether a given statement about finding one third of a whole number is correct. Images given to support.

Greater Depth Explain whether a given statement about finding one third of a whole number is correct. No images given.

More [Year 2 Fractions](#) resources.

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Find a Third

1a. Ben has eaten $\frac{1}{3}$ of his apples. There are 2 apples left. How many has he already eaten?



PS

Find a Third

1b. Kaia has used $\frac{1}{3}$ of her pens. There are 6 left. How many has she already used?



PS

2a. Use the digit cards below to make the statements correct.



$$\frac{1}{3} \text{ of } \square = \square$$

$$\frac{1}{3} \text{ of } \square = \square$$



PS

2b. Use the digit cards below to make the statements correct.



$$\frac{1}{3} \text{ of } \square = \square$$

$$\frac{1}{3} \text{ of } \square = \square$$



PS

3a. Stefan makes 12 windmills. He wants to share them equally between 3 friends. He says,

Each friend will get 3 windmills because 3 is $\frac{1}{3}$ of 12.



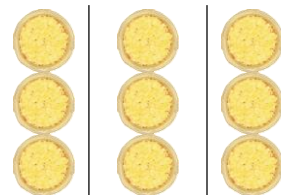
Is Stefan correct? Explain your answer.



R

3b. Fatima makes 9 pizzas. She wants to share them equally between 3 friends. She says,

Each friend will get 4 pizzas because 4 is $\frac{1}{3}$ of 9.



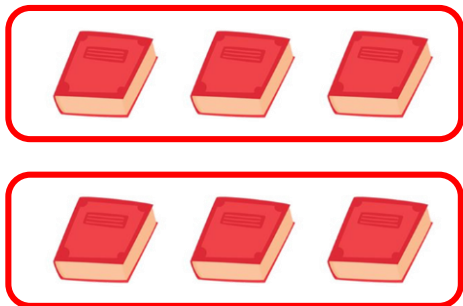
Is Fatima correct? Explain your answer.



R

Find a Third

4a. Sophie has read $\frac{1}{3}$ of her library books. She has 6 left to read. How many has she already read?



PS

Find a Third

4b. Jakub has used $\frac{1}{3}$ of his stickers. There are 8 left in the pack. How many has he already used?



PS

5a. Use the digit cards below to make the statements correct.



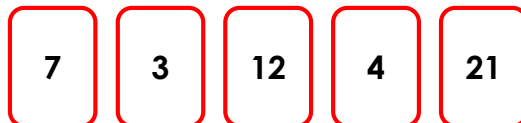
$$\frac{1}{3} \text{ of } \square = \square$$

$$\frac{1}{3} \text{ of } \square = \square$$



PS

5b. Use the digit cards below to make the statements correct.



$$\frac{1}{3} \text{ of } \square = \square$$

$$\frac{1}{3} \text{ of } \square = \square$$



PS

6a. Annabel makes 21 cupcakes. She wants to share them equally between 3 friends. She says,

Each friend will get 8 cupcakes because 8 is $\frac{1}{3}$ of 21.



Annabel



Is Annabel correct? Explain your answer.



R

6b. Hasan makes 18 sandwiches. He wants to share them equally between 3 friends. He says,

Each friend will get 5 sandwiches because 5 is $\frac{1}{3}$ of 18.



Hasan



Is Hasan correct? Explain your answer.



R

Find a Third

7a. Matthew has read $\frac{1}{3}$ of his comic books.

He has 12 left to read.

How many has he already read?



PS

Find a Third

7b. Fozia has eaten $\frac{1}{3}$ of her oranges.

There are 18 left in the bowl.

How many has she already eaten?



PS

8a. Use the digit cards below to make the statements correct. You can use some digit cards more than one



$$\frac{1}{3} \text{ of } \square = \square$$

$$\frac{1}{3} \text{ of } \square = \square$$

$$\frac{1}{3} \text{ of } \square = \square$$



PS

8b. Use the digit cards below to make the statements correct. You can use some digit cards more than one



$$\frac{1}{3} \text{ of } \square = \square$$

$$\frac{1}{3} \text{ of } \square = \square$$

$$\frac{1}{3} \text{ of } \square = \square$$



PS

9a. Adil makes 27 pancakes. He wants to share them equally between 3 friends. He says,

Each friend will get 8 pancakes because 8 is $\frac{1}{3}$ of 27.



Adil

Is Adil correct? Explain your answer.



R

9b. Grace makes 24 tubs of popcorn. She wants to share them equally between 3 friends. She says,

Each friend will get 7 tubs of popcorn because 7 is $\frac{1}{3}$ of 24.



Grace

Is Grace correct? Explain your answer.



R

Reasoning and Problem Solving

Find a Third

Developing

1a. **1**

2a. $\frac{1}{3}$ of 12 = 4 and $\frac{1}{3}$ of 3 = 1

3a. No, $\frac{1}{3}$ of 12 is 4.

Expected

4a. **3**

5a. $\frac{1}{3}$ of 15 = 5 and $\frac{1}{3}$ of 18 = 6

6a. No, $\frac{1}{3}$ of 21 is 7.

Greater Depth

7a. **6**

8a. $\frac{1}{3}$ of 27 = 9 and $\frac{1}{3}$ of 18 = 6 and $\frac{1}{3}$ of 9 = 3

9a. No, $\frac{1}{3}$ of 27 is 9.

Reasoning and Problem Solving

Find a Third

Developing

1b. **3**

2b. $\frac{1}{3}$ of 9 = 3 and $\frac{1}{3}$ of 6 = 2

3b. No, $\frac{1}{3}$ of 9 is 3.

Expected

4b. **4**

5b. $\frac{1}{3}$ of 12 = 4 and $\frac{1}{3}$ of 21 = 7

6b. No, $\frac{1}{3}$ of 18 is 6.

Greater Depth

7b. **9**

8b. $\frac{1}{3}$ of 36 = 12 and $\frac{1}{3}$ of 15 = 5 and $\frac{1}{3}$ of 12 = 4

9b. No, $\frac{1}{3}$ of 24 is 8.