

Calculate Quantities

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1a. Mia completes the following calculation in her book but she has made a mistake.

If $\frac{1}{2}$ is 12, then the whole is 6.

Find the mistake that she has made.

Draw a bar model to prove your answer.



R

1b. Freddy completes the following calculation in his book but he has made a mistake.

If $\frac{1}{3}$ is 9, then the whole is 18.

Find the mistake that he has made.

Draw a bar model to prove your answer.



R

2a. Danny is calculating a whole number from a fraction.

He says,



I know $\frac{1}{4}$ of a number is 5. To find the whole I can divide by 4.

Is he correct? Explain how you know.



R

2b. Ellie is calculating a whole number from a fraction.

She says,



I know $\frac{1}{5}$ of a number is 10. To find the whole I can calculate $10 + 10 + 10 + 10 + 10$.

Is she correct? Explain how you know.



R

3a. Alfie and Sally are counting their birthday presents.

$\frac{1}{5}$ of Alfie's pile is 3 presents.

$\frac{1}{3}$ of Sally's pile is 4 presents.

Who has the most presents?



PS

3b. David and Elsa are each putting pegs on a washing line.

$\frac{1}{7}$ of David's washing line is 5 pegs.

$\frac{1}{8}$ of Elsa's washing line is 4 pegs.

Who has the longest line of pegs?



PS

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4a. Margot completes the following calculation in her book but she has made a mistake.

If $\frac{2}{9}$ is 18, then the whole is 36.

Find the mistake that she has made.

Draw a bar model to prove your answer.



R

4b. Taryn completes the following calculation in her book but she has made a mistake.

If $\frac{3}{5}$ is 15, then the whole is 9.

Find the mistake that she has made.

Draw a bar model to prove your answer.



R

5a. Fiona is calculating a whole number from a fraction.

She says,



I know $\frac{6}{10}$ of a number is 12. To find the whole I can divide by 10 and multiply by 6.

Is she correct? Explain how you know.



R

5b. Malakai is calculating a whole number from a fraction.

He says,



I know $\frac{4}{12}$ of a number is 12. To find the whole I can multiply by 4 because $\frac{4}{12} = \frac{1}{4}$.

Is he correct? Explain how you know.



R

6a. Sam and Brad are each building a tower of blocks.

$\frac{2}{9}$ of Sam's tower is 6 blocks.

$\frac{2}{5}$ of Brad's tower is 8 blocks.

Who has the tallest tower?



PS

6b. Sia and Hugo are each building a domino trail.

$\frac{4}{7}$ of Sia's trail is 12 dominoes.

$\frac{2}{9}$ of Hugo's trail is 4 dominoes.

Who has the longest trail?



PS

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7a. David completes the following calculation in his book but he has made a mistake.

If $\frac{3}{9}$ is 12, then $\frac{8}{18}$ is 16 and the whole is 32.

Find the mistake that he has made.

Draw a bar model to prove your answer.



R

7b. Lilli completes the following calculation in her book but she has made a mistake.

If $\frac{9}{15}$ is 18, then $\frac{2}{5}$ is 8 and the whole is 30.

Find the mistake that she has made.

Draw a bar model to prove your answer.



R

8a. Nathaniel is calculating a whole number from a fraction.

He says,



I know $\frac{6}{9}$ of a number is 12. To find the whole I can divide by 2 and multiply by 3.

Is he correct? Explain how you know.



R

8b. Erin is calculating a whole number from a fraction.

She says,



I know $\frac{8}{18}$ of a number is 24. To find the whole I can multiply 24 by 9.

Is she correct? Explain how you know.



R

9a. Ava, Louis and Ivy are each making a bunch of flowers.

$\frac{2}{7}$ of Ava's bunch is 8 flowers.

Ivy's bunch is $\frac{1}{4}$ larger than Ava's.

Louis bunch is $\frac{1}{7}$ smaller than Ivy's

Who has the largest bunch of flowers?



PS

9b. Wilf, Dominic and Ben are each making a balloon display.

$\frac{2}{8}$ of Dominic's display is 12 balloons.

Wilf's display is $\frac{3}{16}$ smaller than Dominic's.

Ben's display is $\frac{2}{13}$ larger than Wilf's.

Who has the largest balloon display?



PS