

Reasoning and Problem Solving Calculate Quantities

Developing

- 1a. Mia has divided by 2 instead of multiplying by 2. The whole should be 24.
- 2a. Danny is incorrect because he needs to multiply by 4. The correct answer is 20.
- 3a. Alfie has the most presents because he has 15 and Sally has 12.

Expected

- 4a. Margot has multiplied 18 by 2 instead of dividing by 2 and multiplying by 9. The whole should be 81.
- 5a. Fiona is incorrect because she has mixed up the operations for the numerator and denominator. She should have divided by 6 and multiplied by 10.
- 6a. Sam's tower is the tallest because he has used 27 bricks and Brad only used 20.

Greater Depth

- 7a. David has correctly calculated the two fractions of the amount. His mistake is with finding the whole as he doubled 16 to find the whole but this only gives you $\frac{16}{18}$. The whole should be 36.
- 8a. Nathaniel is correct because $\frac{6}{9}$ is equivalent to $\frac{2}{3}$.
- 9a. Ava – 28 flowers; Ivy – 35 flowers; Louis – 30 flowers. Ivy's bunch is the largest.

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Developing

- 1b. Freddy has multiplied by 2 instead of 3. The whole should be 27.
- 2b. Ellie is correct because $10 + 10 + 10 + 10 + 10$ is the same as 5×10 to find $\frac{1}{5}$.
- 3b. David's washing line is the longest because he has used 35 pegs and Elsa has only used 32.

Expected

- 4b. Taryn has divided by 5 and multiplied by 3 instead of dividing by 3 and multiplying by 5. The whole should be 25.
- 5b. Malakai is incorrect because $\frac{4}{12} = \frac{1}{3}$ so he should have multiplied by 3.
- 6b. Sia's trail is the longest because she has used 21 dominoes and Hugo has only used 18 dominoes.

Greater Depth

- 7b. Lilli has correctly found the whole because $18 \div 9 \times 15 = 30$. $\frac{2}{5}$ is incorrect as this would be 12 because $\frac{1}{5} = 6$ ($18 \div 3$).
- 8b. Erin is incorrect. She could find the whole by multiplying 6 by 9 because $\frac{8}{18}$ is equivalent to $\frac{4}{9}$ and $24 \div 4 = 6$.
- 9b. Dominic – 48 balloons; Wilf – 39 balloons; Ben – 45 balloons. Dominic's display is the largest.