

Solve the following problems where fractions are used as operators.

- a) $\frac{2}{3}$ of the floor tiles needed to be replaced. The total number of equal sized tiles on the floor was 60. How many tiles had to be replaced?

$$\frac{1}{3} \times (\text{of}) 60 = 20; \frac{2}{3} \times (\text{of}) 60 = \mathbf{40}$$

- b) How much would you pay for a \$132 pair of shoes marked 25% off?

$$25\% = \frac{1}{4}$$

$$\frac{1}{4} \times 132 = 132 \div 4$$

$$132 \div 4 = 33$$

$$132 - 33 = \mathbf{\$99}$$

- c) Which is the larger, $\frac{3}{5}$ of 45 or $\frac{4}{5}$ of 40?

(We cannot assume that the second one is the largest just because $\frac{4}{5}$ is a larger fraction than $\frac{3}{5}$, as they relate to different wholes).

$$\frac{3}{5} \text{ of } \mathbf{45:}$$

$$\frac{1}{5} \times (\text{of}) 45 = 9 (45 \div 5)$$

$$\frac{3}{5} \times (\text{of}) 45 = \mathbf{27} (3 \times 9)$$

$$\frac{4}{5} \text{ of } \mathbf{40:}$$

$$\frac{1}{5} \times (\text{of}) 40 = 8 (40 \div 5)$$

$$\frac{4}{5} \times (\text{of}) 40 = \mathbf{32} (4 \times 8)$$

Or

$$\frac{1}{5} \times (\text{of}) 40 = 8 (40 \div 5)$$

$$\frac{4}{5} = 40 - 8$$

$$40 - 8 = \mathbf{32}$$

Therefore $\frac{4}{5}$ of 40 is larger than $\frac{3}{5}$ of 45.