

## Fudge

Cathy makes fudge, which she sells to make money for her school.


For \$10 she can buy the ingredients to make 4 trays of fudge.

She cuts each ~~tray~~ <sup>tray</sup> into 10 pieces. The pieces are sold individually.

40 pieces

1. In order to cover the cost of the ingredients, how much should Cathy charge for each piece of fudge?

Show your work.

$$\frac{\$10}{40} \rightarrow \$.25/\text{piece}$$


2. Cathy wants to make a profit of 20%.  
How much should she charge for each piece of fudge?

40

$$\underbrace{\$10 \times 20\% = \$2}_{\$12} = \boxed{\$12}$$

$$\frac{\$12}{40} = \$.30/\text{piece}$$

3. The cost of the ingredients goes up by 5%. Cathy thinks she should increase the original cost of each piece of fudge by 25% in order to continue making a profit of 20%.

Cathy is **not** correct. Explain why she is not correct.

$$\textcircled{1} \quad \$0.25 \times 25\% = \$0.06 \rightarrow \$0.31/\text{piece}$$

$$\textcircled{2} \quad 40 \times \$0.31 = \$12.40$$

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$$\$10 \times 5\% = .50 = \boxed{10.50} \quad \left. \vphantom{\$10 \times 5\% = .50 = \boxed{10.50}} \right\} 1.90$$