

Task #3: Felicia's Drive

As Felicia gets on the freeway to drive to her cousin's house, she notices that she is a little low on gas. There is a gas station at the exit she normally takes, and she wonders if she will have to get gas before then. She normally sets her cruise control at the speed limit of 70mph and the freeway portion of the drive takes about an hour and 15 minutes. Her car gets about 30 miles per gallon on the freeway, and gas costs \$3.50 per gallon. (Source: Illustrative Mathematics)

- a. Describe an estimate that Felicia might do in her head while driving to decide how many gallons of gas she needs to make it to the gas station at the other end.

$$\begin{array}{l} \underbrace{1 \text{ hour}} \\ 70 \text{ miles} \end{array} \quad \begin{array}{l} \underbrace{15 \text{ minutes}} \\ \approx 18 \text{ miles} \end{array}$$

$$\begin{array}{l} 1.15 \times \\ 1.25 \checkmark \end{array}$$

$$70 \text{ miles} + 18 \text{ miles} = 88 \text{ miles}$$

$$88 \text{ miles} \div 30 \approx 3 \text{ gallons of gas}$$

- b. Assuming she makes it, how much does Felicia spend per mile on the freeway?

$$\begin{array}{l} \$ \div \text{mile} \\ \$3.50 \div 30 \approx \$0.12 \text{ per mile} \end{array}$$