

Bellwork Hon Alg 2 Thursday, March 23, 2017

1. The amount of time that Amy walks is directly proportional to the distance that she walks. If she walks a distance of 2.5 miles in 50 minutes, how many miles will she walk in 2 hours?

- A. 3
- B. 4.5
- C. 5
- D. 6
- E. 6.5

3. Of all the houses in a certain neighborhood, 80% have garages. Of those with garages, 60% have two-car garages. If there are 56 houses with garages that are not two-car garages, how many houses are there in the neighborhood?

- A. 26
- B. 93
- C. 117
- D. 156
- E. 175

2. A total of 140,000 votes were cast for two candidates, Skinner and White. If Skinner won by a ratio of 4 to 3, how many votes were cast for Skinner?

- A. 30,000
- B. 40,000
- C. 60,000
- D. 80,000
- E. 105,000

4. On Tuesday, a watchmaker made 4 more watches than he had the previous day. If he made 16% more watches on Tuesday than on Monday, how many watches did he make on Tuesday?

- A. 16
- B. 20
- C. 21
- D. 25
- E. 29

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$$(1) \frac{2.5 \text{ mi}}{50 \text{ min}} = \frac{x \text{ mi}}{120 \text{ min}}$$

$$x = 6 \text{ mi}$$

D

$$(2) \frac{4 \text{ skinner}}{7 \text{ TOTAL}} = \frac{x \text{ skinner}}{140,000 \text{ TOTAL}}$$

$$x = 80,000$$

D

$$(3) \text{ houses w/ garages} = x \quad \begin{array}{l} 60\% \rightarrow 2\text{-car garage} \\ 40\% \rightarrow \text{not } 2\text{-car garage} \end{array}$$

$$40\% \text{ of } x = 56$$

$$(0.40)x = 56$$

$$x = 140 \text{ houses w/ garages}$$

$$\text{all houses} = y$$

$$80\% \text{ have garages}$$

$$80\% \text{ of } y = 140$$

$$(0.80)y = 140$$

$$y = 175 \text{ TOTAL HOUSES}$$

E

$$(4) \begin{array}{l} \text{Mon} = x \text{ watches} \\ \text{Tues} = x + 4 \text{ watches} \end{array}$$

$$\text{Tues} = 16\% \text{ more than Mon}$$

$$\text{Tues} = 116\% \text{ of Mon}$$

$$\begin{array}{r} x + 4 = 1.16x \\ -x \qquad -x \end{array}$$

$$4 = 0.16x$$

$$x = 25 \rightarrow \text{Mon}$$

$$\text{Tues} = \text{Mon} + 4 = 29$$

E