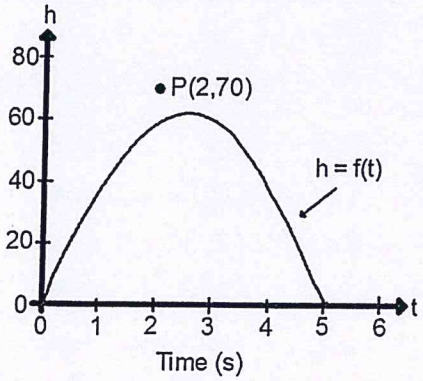
Bellwork Alg 2 Tuesday, October 16, 2018

1. The height, in meters, of a golf ball t seconds after it was hit is given by the function $f(t) = at^2 + bt + c$ where $a, b,$ and c are constants.

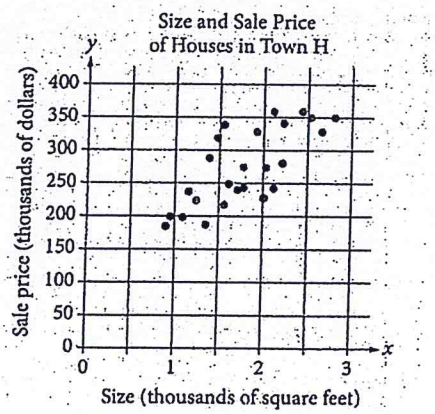
The graph of f is shown at the right.



The point $P(2, 70)$ represents the height of a bird at a given point in time. Which of the following expressions correctly compares the height of the ball and the height of the bird at that point in time?

A) $f(70) > 2$ B) $f(70) < 2$ C) $f(2) > 70$ D) $f(2) < 70$

2. The scatter plot below shows the size x and sale price y of 25 houses for sale in Town H. Which of the following could be an equation for a line of best fit for the data?



A) y = 200x + 100

B) y=100x + 100

C) y = 50x + 100

D) y = 100x

3. Convert 25 pounds into kilograms using these conversion factors.

1 pound = 16 ounces

4 ounces = 113.4 grams

1 kilogram = 1000 grams

4. Given this equation: $ax + b = 3x - 4$ where a and b are constants. If the equation has no solution, which of the following must be true about a and b?

A) $a \neq 3$ and $b \neq 4$ B) $a = 3$ and $b \neq -4$ C) $a = 3$ and $b = -4$ D) $a = -3$ and $b = 4$

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ANSWERS

1. The height, in meters, of a golf ball t seconds after it was hit is given by the function $f(t) = at^2 + bt + c$ where $a, b,$ and c are constants.

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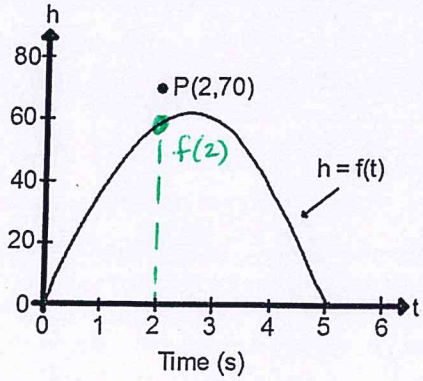

Since f(2) is below point P

$f(2) < 70$

The point $P(2, 70)$ represents the height of a bird at a given point in time. Which of the following expressions correctly compares the height of the ball and the height of the bird at that point in time?

A) $f(70) > 2$ B) $f(70) < 2$ C) $f(2) > 70$ D) $f(2) < 70$

2. The scatter plot below shows the size x and sale price y of 25 houses for sale in Town H. Which of the following could be an equation for a line of best fit for the data?

A) y = 200x + 100 BLUE LINE

B) y=100x + 100 GREEN LINE

SEEMS TO BE THE BEST FIT

C) y = 50x + 100 RED LINE

D) y = 100x orange line

3. Convert 25 pounds into kilograms using these conversion factors.

1 pound = 16 ounces

4 ounces = 113.4 grams

1 kilogram = 1000 grams

$$25 \text{ lbs} \cdot \frac{16 \text{ oz}}{1 \text{ lb}} \cdot \frac{113.4 \text{ g}}{4 \text{ oz}} \cdot \frac{1 \text{ kg}}{1000 \text{ g}} = 11.34 \text{ kg}$$

4. Given this equation: $ax + b = 3x - 4$ where a and b are constants. If the equation has no solution, which of the following must be true about a and b?

A) $a \neq 3$ and $b \neq 4$ B) $a = 3$ and $b \neq -4$ C) $a = 3$ and $b = -4$ D) $a = -3$ and $b = 4$

THE X-TERMS MUST BE THE SAME $a = 3$

THE CONSTANTS MUST BE DIFFERENT $b \neq -4$