Algebra 2 Bellwork Monday, November 9, 2015

1. Make a scatter plot of the data below. Sketch the scatter plot, labeling the axes.

Years since 1988	0	2	4	6	8	10
Avg House Price (thousands of dollars)	165	154.5	124.5	115	128	165

a) Find a regression equation to model this data.
Round to the nearest hundredth.

EQ:

b) Find the average price of a house in 1985.
Round to the nearest dollar.

c) Find the average price of a house in 2000.
Round to the nearest dollar.

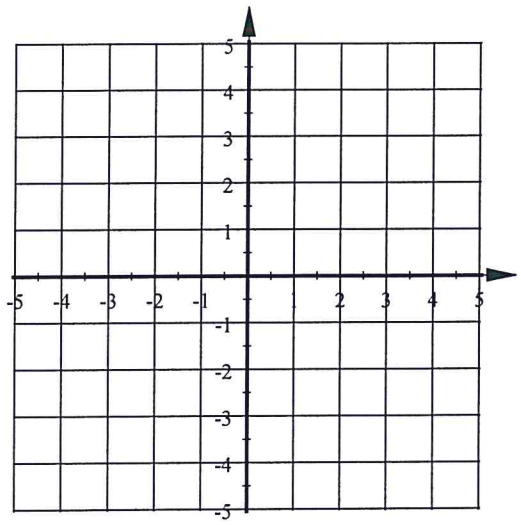
2. Use this Quadratic:
$y = 2x^2 - 12x + 14$

a) State the equation for the LOS.

b) State the coorinates of the vertex.

c) State the y-intercept.

d) Graph this parabola using at least five points.



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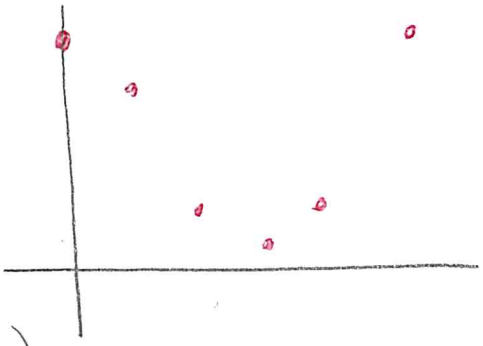
ANSWERS

1. Make a scatter plot of the data below. Sketch the scatter plot, labeling the axes.

X	Years since 1988	0	2	4	6	8	10
y	Avg House Price (thousands of dollars)	165	154.5	124.5	115	128	165



a) Find a regression equation to model this data.
Round to the nearest hundredth.

EQ: $y = 1.83x^2 - 19.55x + 172.73$

b) Find the average price of a house in 1985.
Round to the nearest dollar.

$x = -3$ (3 yrs in the past)

$y = \$247,850$

c) Find the average price of a house in 2000.
Round to the nearest dollar.

$x = 12$ (12 yrs in the future)

$y = \$201,650$

2. Use this Quadratic:

$y = 2x^2 - 12x + 14$

a) State the equation for the LOS.

$x = \frac{12}{2(2)} = \frac{12}{4}$ $x = 3$

b) State the coorinates of the vertex.

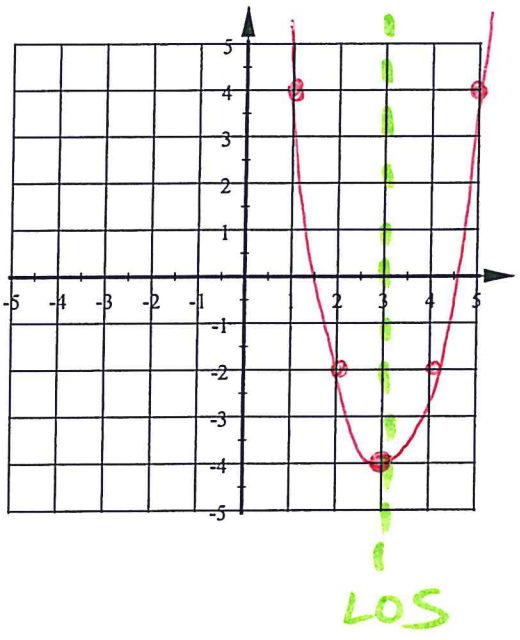
$(3, -4)$

$2(3)^2 - 12(3) + 14$
$2(9) - 12(3) + 14$
$18 - 36 + 14$
$-18 + 14$
$= -4$

c) State the y-intercept.

$y = 2(0)^2 - 12(0) + 14 = 14$

d) Graph this parabola using at least five points.



X	Y	
1	4	$2(1)^2 - 12(1) + 14$
2	-2	$2(2)^2 - 12(2) + 14$