Warm Up 5/30/19

#45 - 50 on Released EOC

45 What is the distance between the y-intercept of the function $f(x) = 2x^2 - 6x + 3$ and the y-intercept of the linear function g represented by the table below?

x	$g(x)$
-5	15
-2	3
2	-13
5	-25

A 2 units

B 3 units

C 8 units

D 9 units

46 The table below displays the walking heart rate and running heart rate of eight girls in beats per minute (bpm).

Walking Heart Rate	Running Heart Rate
66	128
72	136
74	134
78	138
80	142
84	146
86	148
88	152

y=1.04x+58.84

1.04(100)+58.84

162.84

Using the linear best-fit model for the data, what is the predicted running heart rate of a girl whose walking heart rate is 100 bpm?

A 161 bpm

B 163 bpm

C 165 bpm

D 167 bpm

47 This is a paper/pencil copy of an online technology enhanced item.

Place (click and drag) the data sets below into the appropriate rows in the table.

Symmetric about the Mean	
Skewed Left	
Skewed Right	

15, 25, 35, 45, 55, 115

15, 75, 85, 95, 105, 115

15, 25, 35, 45, 55, 65

48 A rectangle has a perimeter of 64.

- Let x equal the width of the rectangle.
- Let y equal the area of the rectangle.

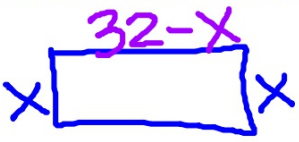
Which equation can be used to find the area of the rectangle?

A $y = x^2 - 64x$

B $y = -x^2 + 64x$

C $y = x^2 - 32x$

D $y = -x^2 + 32x$



$P = 64$

$P = 2w + 2l$

$-2w \quad -2w$

$P - 2w = 2l$

$\frac{P-2w}{2} = \frac{2l}{2}$

$l = \frac{P-2w}{2}$

$l = \frac{64-2x}{2}$

$l = 32 - x$

$x(32-x)$

$32x - x^2$

$-x^2 + 32x$

49 What is the midpoint of the longest side of the triangle with vertices (1, 4), (3, 4), and (3, 6)?

A (1, 1)

B (2, 4)

C (2, 5)

D (3, 5)

A B C

AB: $\sqrt{(3-1)^2+(4-4)^2}$ $\sqrt{2^2}=\sqrt{4}$ 2

BC: $\sqrt{(3-3)^2+(6-4)^2}$ $\sqrt{2^2}=\sqrt{4}$ 2

AC: $\sqrt{(3-1)^2+(6-4)^2}$ $\sqrt{2^2+2^2}$ $\sqrt{8}$

longest side

$\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$

$\left(\frac{1+3}{2}, \frac{4+6}{2}\right)$

(2, 5)

50 The table below shows the hours, x, spent working on a new road and the distance, y, of finished road.

Time (hours)	**Distance** (miles)
50	1.5
200	6
350	10.5
400	12
650	19.5

What is the slope of the line that fits these data?

A $\frac{3}{400}$

B $\frac{3}{100}$

C $\frac{3}{25}$

D 3