

Flashback #5

1. Which of the following attains a minimum value at (4, -1)?

$3x + 2y$	$3x + 4y$	$3x + 10y$	$10x + 3y$
$3(4) + 2(-1)$	$3(4) + 4(-1)$	$3(4) + 10(-1)$	$10(4) + 3(-1)$
$12 - 2$	$12 - 4$	$12 - 10$	$40 - 3$
10	8	2	37

2. Give the inequality that can be represented by the following graph.

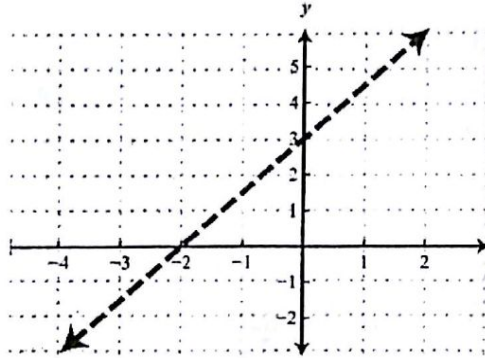
$$b = 3 \quad m = -\frac{3}{2}$$

$$y \square -\frac{3}{2}x + 3$$

test pt from shaded region

$$0 \square -\frac{3}{2}(0) + 3$$

$$0 \square 3 \rightarrow y < -\frac{3}{2}x + 3$$



3. Given that the zeros of a quadratic function are -5 and 9, and the graph has a y-intercept of -90, what is the vertex of the function?

$$y = a(x - r)(x - s)$$

$$y = a(x + 5)(x - 9)$$

$$-90 = a(5)(-9)$$

$$-90 = -45a$$

$$\frac{-90}{-45} = \frac{-45a}{-45} \quad \boxed{a = 2}$$

$$y = 2(x + 5)(x - 9)$$

x coord of vertex

$$= \frac{5 + (-9)}{2}$$

$$= \frac{4}{2}$$

y coord of vertex

$$y = 2(2 + 5)(2 - 9)$$

$$\downarrow$$

$$(0, -90)$$

$$y = 2(7)(-7)$$

$$= -98$$

$$\boxed{V(2, -98)}$$

4. Factor $20x^2 + 6x - 8$

$$2(10x^2 + 3x - 4)$$

$$2(5x + 4)(2x - 1)$$

5. Describe the graph $y = -3(x + 5)^2 - 2$

opens down yint: -77

$$V(-5, -2)$$

narrow

6. The average mass of golf balls produced at a factory is 45.6 grams 0.3 grams. The results are accurate 19 out of 20 times. Determine the confidence level, confidence interval and margin of error.

$$CL = \frac{19}{20} \rightarrow 95\%$$

$$CI \rightarrow 45.6 \pm 0.3$$

$$(45.3, 45.9)$$

$$Mof E \pm 0.3g$$

