

Name: _____

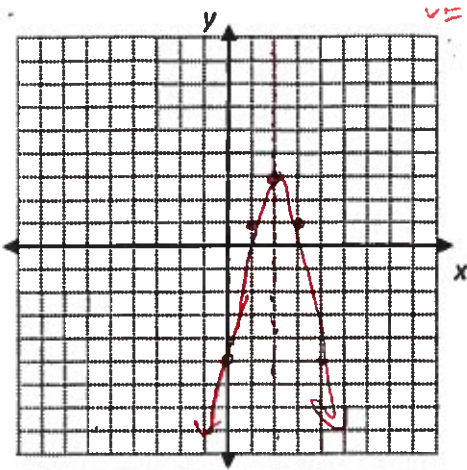
Key

Unit 6 (chapter 9) mini review

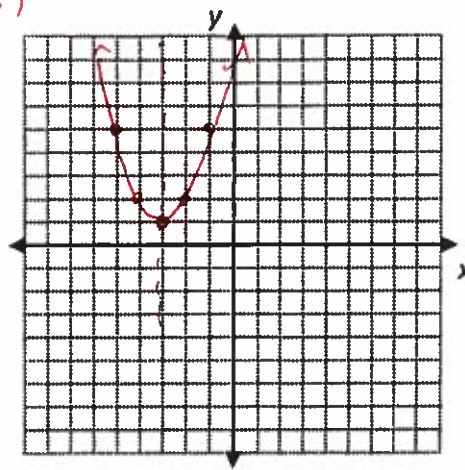
For 1-3, solve by graphing:

1) $y = -2x^2 + 8x - 5$

$x = \frac{-(-8)}{2(-2)} = 2$
 $v = (2, 3)$

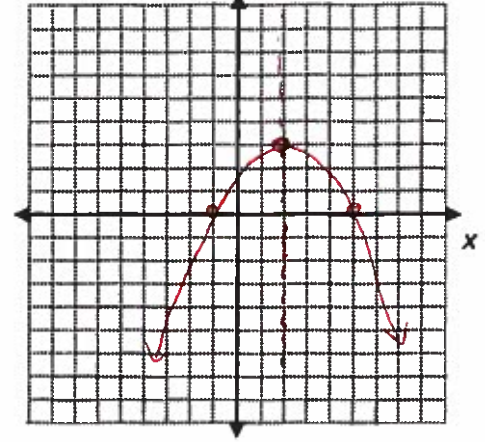


2) $y = (x + 3)^2 + 1$



3) $y = -\frac{1}{3}(x+1)(x-5)$

$v = (2, 3)$



Solution(s): 2, 3 + 3.1

Solution(s): no sol

Solution(s): -1, 5

For problems 4-6, use the graphs that correspond above. Determine the transformations.

4) see #1 above

R: yes

T: right 2
up 3

D: v.s.

Domain: $\mathbb{R}$

Range: $y \leq 3$

5) see #2 above

R: no

T: left 3, up 1

D: none; "normal"

Domain: $\mathbb{R}$

Range: $y \geq 1$

6) see #3 above

R: yes

T: right 2
up 3

D: v.c.

Domain: $\mathbb{R}$

Range: $y \leq 3$

For 7-9, factor the expression:

7) $x^2 - x - 20$

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

8) $9x^2 + 6x + 1$

$x^2 + 6x + 9$

$(x + 3)^2$

$(3x + 1)^2$

9) $3u^2 - 108$

$3(u^2 - 36)$

$3(u - 6)(u + 6)$