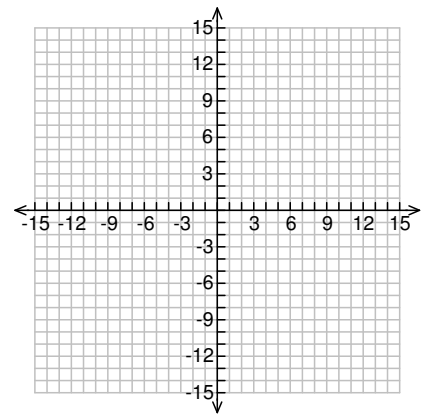


MCF 3M1
Transformations

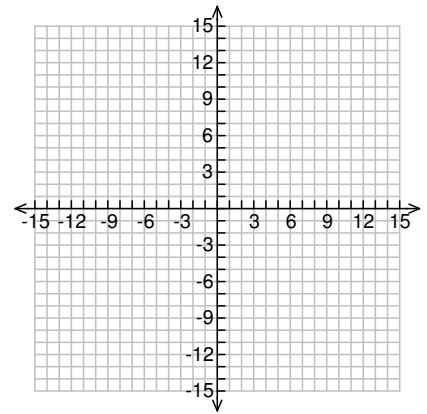
Complete the chart.

Quadratic Function	State the Transformations	Sketch the Transformations
$y = x^2 + 5$		
$y = 2x^2 - 12x + 18$		
$y = \frac{1}{2}x^2 + 6x + 15$		

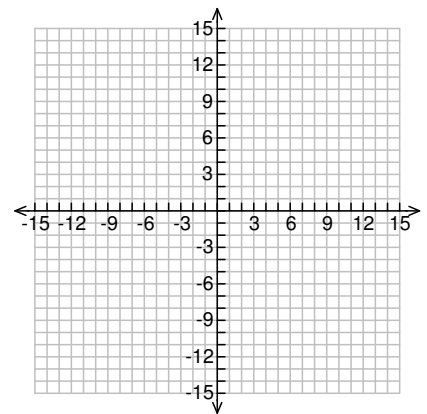
$$y = -4x^2 - 4x - 96$$



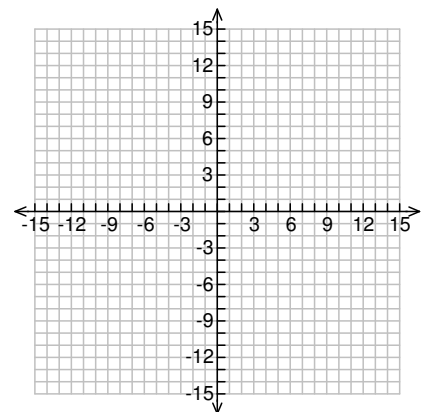
$$y = -x^2 - 6x - 15$$



$$y = -\frac{1}{2}x^2 - 5x - \frac{21}{2}$$



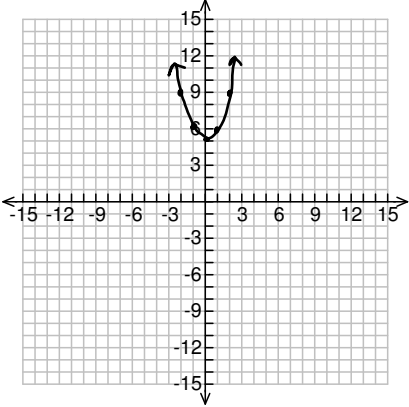
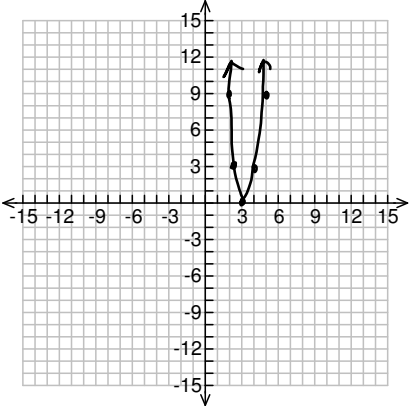
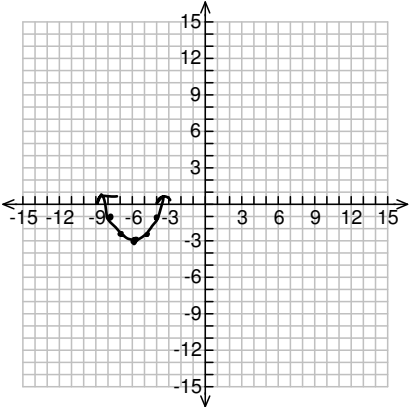
$$y = -3x^2 - 30x + 77$$



MCF 3M1
Transformations

ANSWERS

Complete the chart.

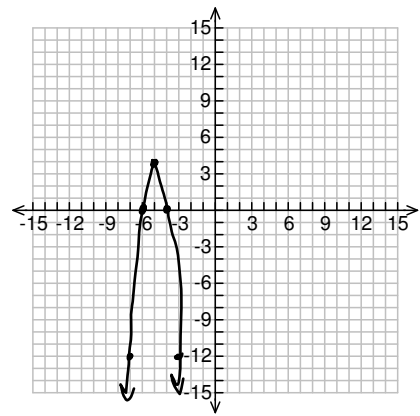
Quadratic Function	State the Transformations	Sketch the Transformations
$y = x^2 + 5$ vertex (0,5) step 1, 3, 5	up 5	
$y = 2x^2 - 12x + 18$ $y = 2(x - 3)^2$ vertex (3, 0) step 2, 6, 10	vertical stretch by 2 shift right 3	
$y = \frac{1}{2}x^2 + 6x + 15$ $y = \frac{1}{2}(x + 6)^2 - 3$ vertex (-6, -3) step 0.5, 1.5, 2.5	vertical compress $\frac{1}{2}$ left 6 down 3	

$$y = -4x^2 - 4x - 96$$

$$y = -4(x+5)^2 + 4$$

Vertex $(-5, 4)$
step $-4, -12, -20$

reflect in x-axis
vertical stretch
left 5
up 4

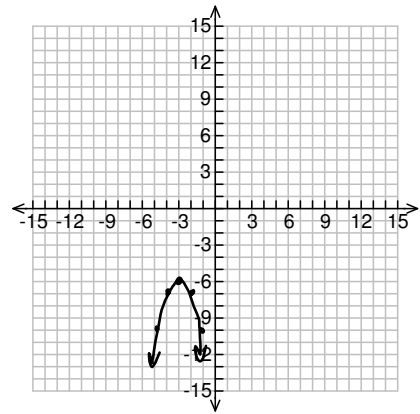


$$y = -x^2 - 6x - 15$$

$$y = -(x+3)^2 - 6$$

Vertex $(-3, -6)$
step $-1, -3, -5$

reflected in x-axis
left 3
down 6

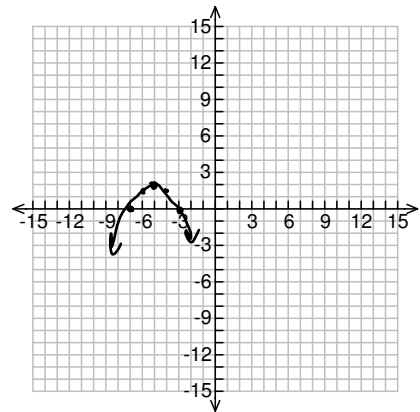


$$y = -\frac{1}{2}x^2 - 5x - \frac{21}{2}$$

$$y = -\frac{1}{2}(x+5)^2 + 2$$

Vertex $(-5, 2)$
step $-0.5, -1.5, -2.5$

reflect in x-axis
vertical compress
left 5
up



$$y = -3x^2 - 30x + 77$$

$$y = -3(x-5)^2 + 2$$

Vertex $(5, 2)$
step $-3, -9, -15$

reflect in x-axis
vertical stretch
right 5
up 2

