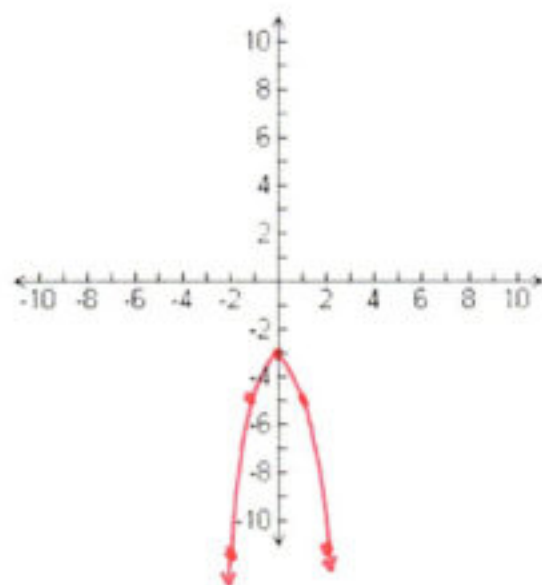
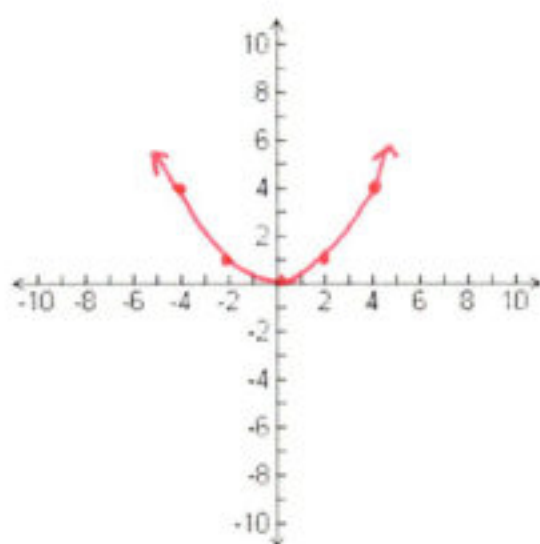


4. $y = -2x^2 - 3$



coordinates of vertex	$(0, -3)$
equation to the axis of symmetry	$x = 0$
y-intercept of the parabola	$(0, -3)$
x-intercept of the parabola	N/A
domain in interval notation	$(-\infty, \infty)$
range in interval notation	$(-\infty, -3]$
interval of increase	$(-\infty, 0)$
interval of decrease	$(0, \infty)$
average rate of change on the interval $[0, 1]$	-2
circle: maximum or minimum value	$y = -3$
end behavior	$f(x) \rightarrow -\infty$ as $x \rightarrow \infty$ $f(x) \rightarrow -\infty$ as $x \rightarrow -\infty$

5. $y = \frac{1}{4}x^2$

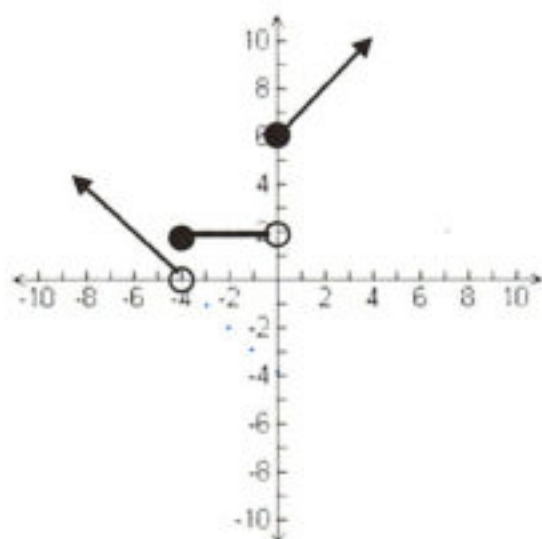


coordinates of vertex	$(0, 0)$
equation to the axis of symmetry	$x = 0$
y-intercept of the parabola	$(0, 0)$
x-intercept of the parabola	$(0, 0)$
domain in interval notation	$(-\infty, \infty)$
range in interval notation	$[0, \infty)$
interval of increase	$(0, \infty)$
interval of decrease	$(-\infty, 0)$
average rate of change on the interval $[-4, 0]$	-1
circle: maximum or minimum value	$y = 0$
end behavior	$f(x) \rightarrow \infty$ as $x \rightarrow \infty$ $f(x) \rightarrow \infty$ as $x \rightarrow -\infty$

SPIRAL REVIEW

6. Write an equation of the piecewise function.

$$f(x) = \begin{cases} -x - 4, & \text{if } x < -4 \\ 2, & \text{if } -4 \leq x < 0 \\ x + 6, & \text{if } x \geq 0 \end{cases}$$



7. Graph the piecewise function.

$$f(x) = \begin{cases} -3x, & \text{if } x > 1 \\ x + 1, & \text{if } x \leq 1 \end{cases}$$

