

1. Describe all transformations from the parent function given the function below.

$$f(x) = -4(x + 2) - 1$$

- _____
- _____
- _____
- _____

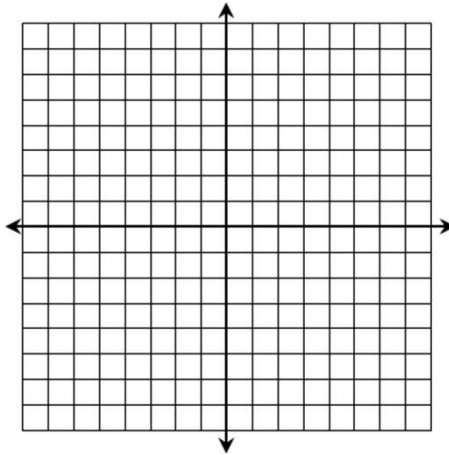
2. Describe all transformations from the parent function given the function below.

$$f(x) = \frac{1}{2}(x - 3)^2 + 7$$

- _____
- _____
- _____
- _____

For questions 3-5, graph each function and identify all key characteristics.

3. $f(x) = -(x + 1)^3 + 6$



Domain:

Range:

x-int(s):

y-int:

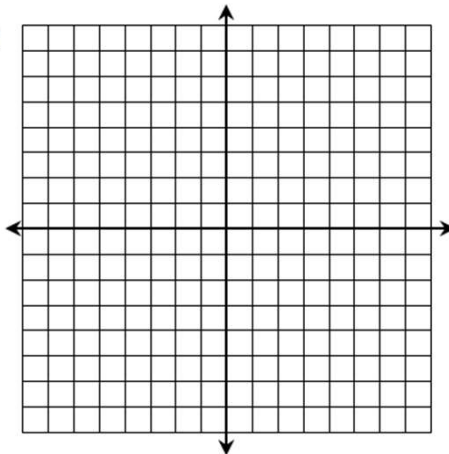
Extrema:

Increasing Interval(s):

Decreasing Interval(s):

End Behavior:

4. $f(x) = \sqrt{-3(x - 5)} - 2$



Domain:

Range:

x-int(s):

y-int:

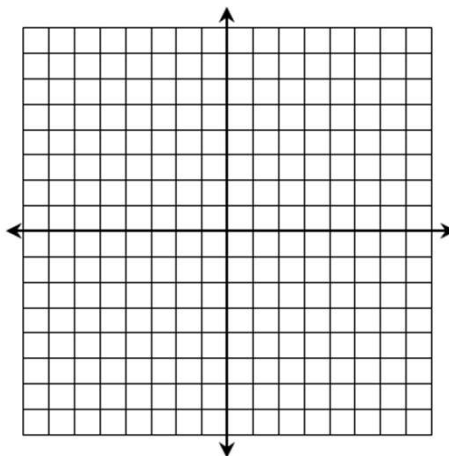
Extrema:

Increasing Interval(s):

Decreasing Interval(s):

End Behavior:

5. $f(x) = -\frac{2}{x} + 4$



Domain:

Range:

x-int(s):

y-int:

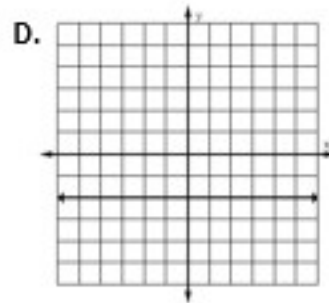
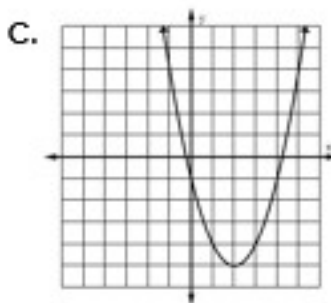
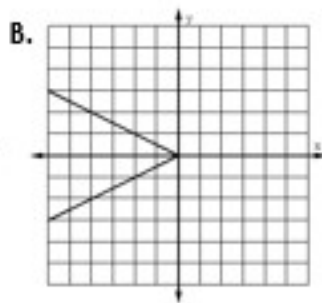
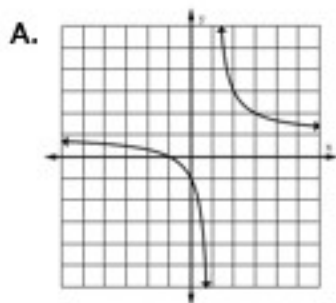
Extrema:

Increasing Interval(s):

Decreasing Interval(s):

End Behavior:

6. Which relation below represents a one-to-one function?



7. Determine whether the function below is even, odd, or neither. Prove your answer algebraically.

$$f(x) = -2x^3 + 8x$$

- even
 odd
 neither

8. Which statement about the function below is true?

$$f(x) = \sqrt{5 - x^2}$$

- A.** It is odd and symmetric to the origin.
B. Odd and symmetric to the y -axis.
C. Even and symmetric to the origin.
D. Even and symmetric to the y -axis.

9. Which function is not one-to-one?

A. $f(x) = -\sqrt{x+4}$

B. $f(x) = 5 - x^2$

C. $f(x) = 4x^2 + 1$

D. $f(x) = -\frac{2}{x} + 7$