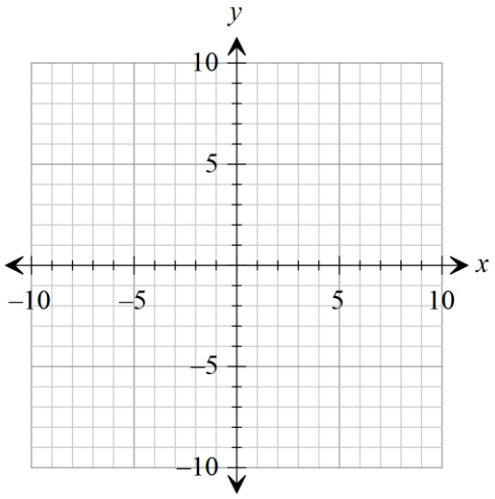
4.8

Name _____ Date _____ Period _____

SM3 4.8 More on Transformations

1. Graph the function, $f(x)=|x|$ below. Make sure your graph has at least 5 points clearly marked.

x	*f(x)*



Sketch the following transformations, using the parent function.

2. $f(x)=-|x+2|-3$

a) **Parent**

x	*f(x)*

b) **Reflections**

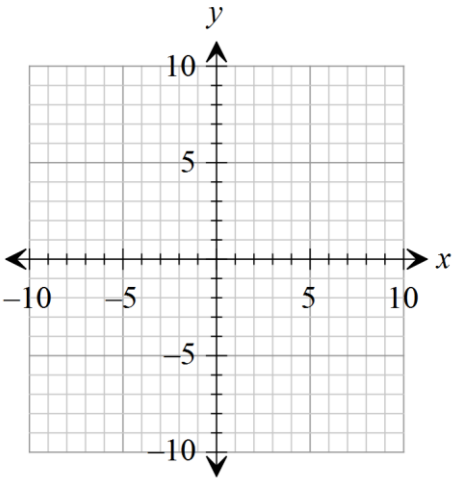
x	*f(x)*

c) **Stretches/ Compressions**

x	*f(x)*

d) **Translations (Shifts)**

x	*f(x)*



Domain:

Range:

3. $f(x) = |-2x| - 3$

a) **Parent**

x	*f(x)*

b) **Reflections**

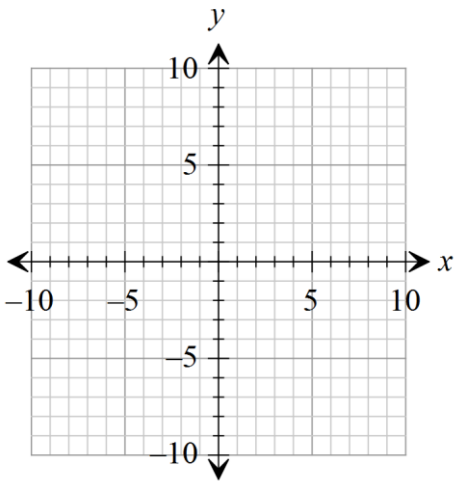
x	*f(x)*

c) **Stretches/ Compressions**

x	*f(x)*

d) **Translations (Shifts)**

x	*f(x)*



4. $f(x) = -|2(x+3)| - 3$

a) **Parent**

x	*f(x)*

b) **Reflections**

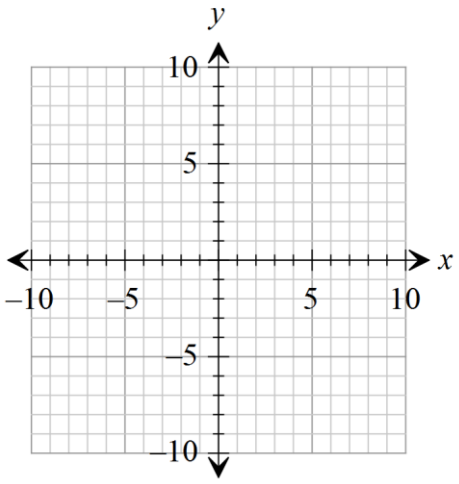
x	*f(x)*

c) **Stretches/ Compressions**

x	*f(x)*

d) **Translations (Shifts)**

x	*f(x)*



5. $f(x)=\frac{1}{2}|x-5|$

a) **Parent**

x	*f(x)*

b) **Reflections**

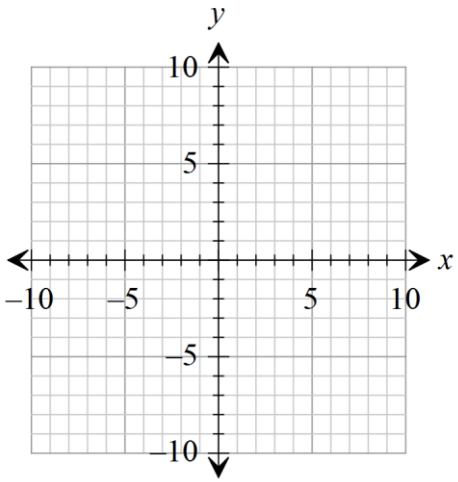
x	*f(x)*

c) **Stretches/ Compressions**

x	*f(x)*

d) **Translations (Shifts)**

x	*f(x)*



Sketch each of the following functions without using a graphing calculator. Then find the domain and range of each function.

6. $f(x)=x^2-3$

a) **Parent**

x	*f(x)*

b) **Reflections**

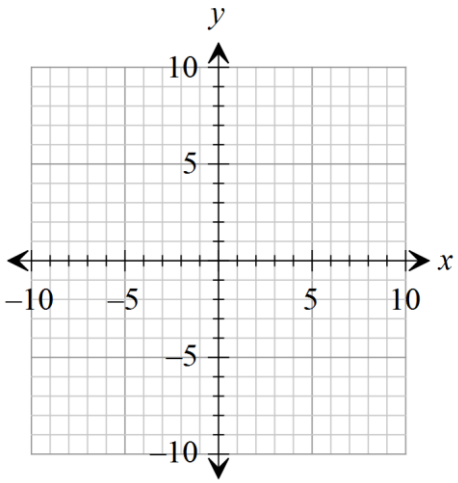
x	*f(x)*

c) **Stretches/ Compressions**

x	*f(x)*

d) **Translations (Shifts)**

x	*f(x)*



Domain:

Range:

7. $f(x)=\frac{3}{2}x-7$

a) **Parent**

x	*f(x)*

b) **Reflections**

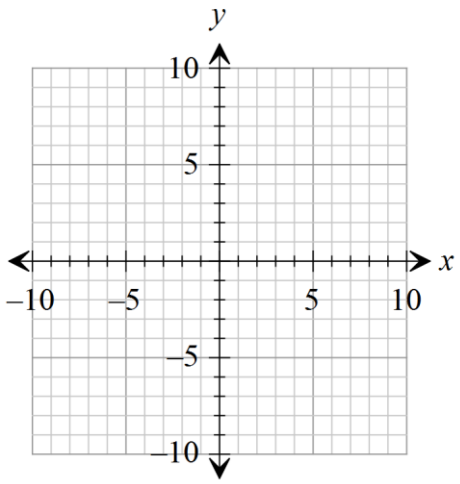
x	*f(x)*

c) **Stretches/ Compressions**

x	*f(x)*

d) **Translations (Shifts)**

x	*f(x)*



Domain:

Range:

8. $f(x)=(x-5)^3+2$

a) **Parent**

x	*f(x)*

b) **Reflections**

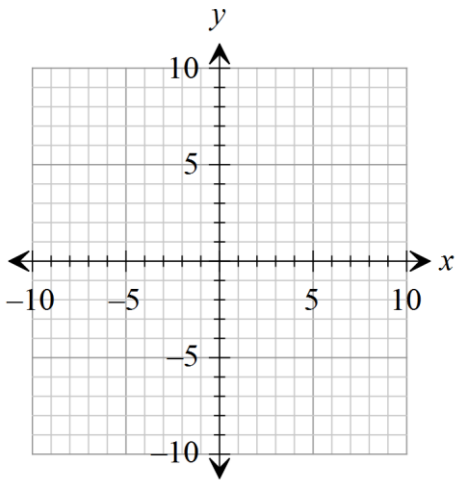
x	*f(x)*

c) **Stretches/ Compressions**

x	*f(x)*

d) **Translations (Shifts)**

x	*f(x)*



Domain:

Range:

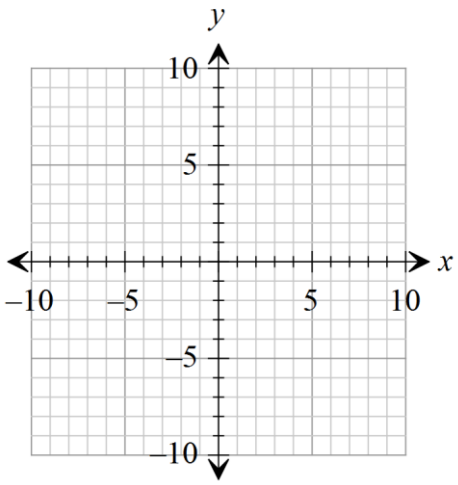
9. $f(x) = 2\sqrt[3]{x}$

a) **Parent**

x	*f(x)*

b) **Reflections**

x	*f(x)*



c)

Stretches/ Compressions

x	*f(x)*

d)

Translations (Shifts)

x	*f(x)*

Domain:

Range:

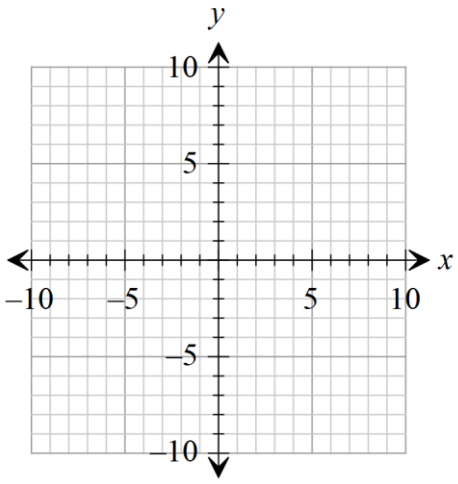
10. $f(x) = -\sqrt{x-3}$

a) **Parent**

x	*f(x)*

b) **Reflections**

x	*f(x)*



c)

Stretches/ Compressions

x	*f(x)*

d)

Translations (Shifts)

x	*f(x)*

Domain:

Range:

11. $f(x) = -4x + 1$

a) **Parent**

x	*f(x)*

b) **Reflections**

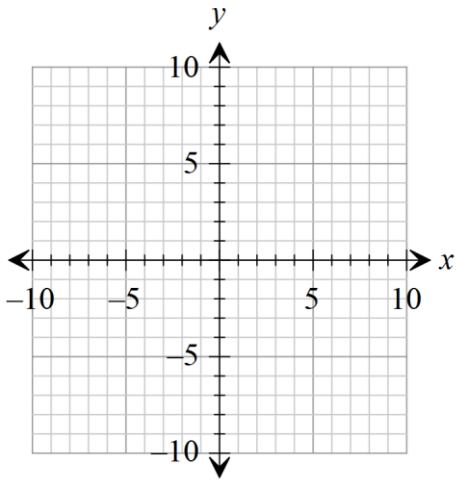
x	*f(x)*

c) **Stretches/ Compressions**

x	*f(x)*

d) **Translations (Shifts)**

x	*f(x)*



Domain:

Range:

12. $f(x) = \sqrt[3]{x-7} + 2$

a) **Parent**

x	*f(x)*

b) **Reflections**

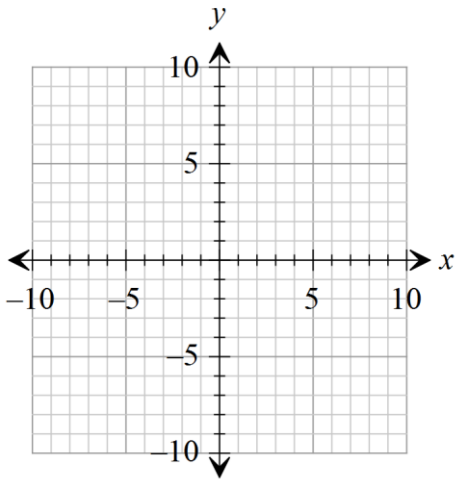
x	*f(x)*

c) **Stretches/ Compressions**

x	*f(x)*

d) **Translations (Shifts)**

x	*f(x)*



Domain:

Range:

13. $f(x) = 3(x-2)^2 - 6$

a) **Parent**

x	*f(x)*

b) **Reflections**

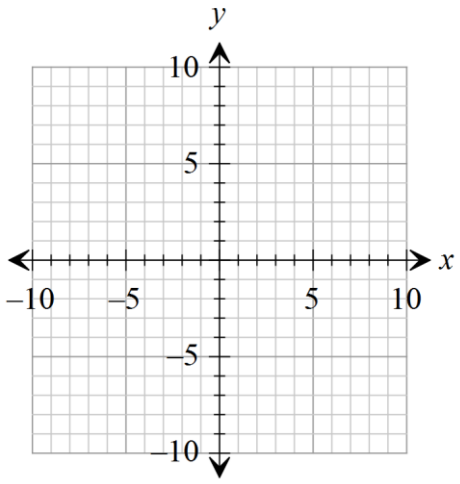
x	*f(x)*

c) **Stretches/ Compressions**

x	*f(x)*

d) **Translations (Shifts)**

x	*f(x)*



Domain:

Range:

14. $f(x) = -\sqrt{-(x+2)} + 4$

a) **Parent**

x	*f(x)*

b) **Reflections**

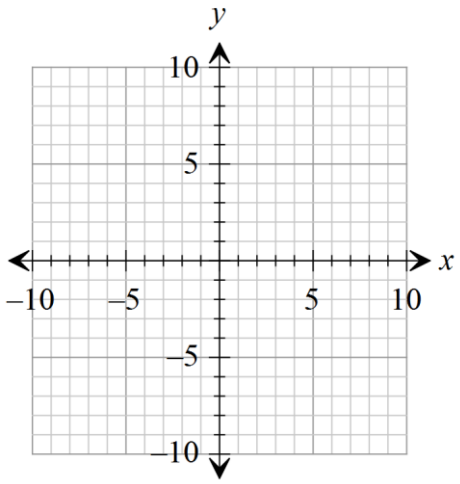
x	*f(x)*

c) **Stretches/ Compressions**

x	*f(x)*

d) **Translations (Shifts)**

x	*f(x)*



Domain:

Range:

15. $f(x)=\frac{1}{3}(x-1)^3$

a) **Parent**

x	*f(x)*

b) **Reflections**

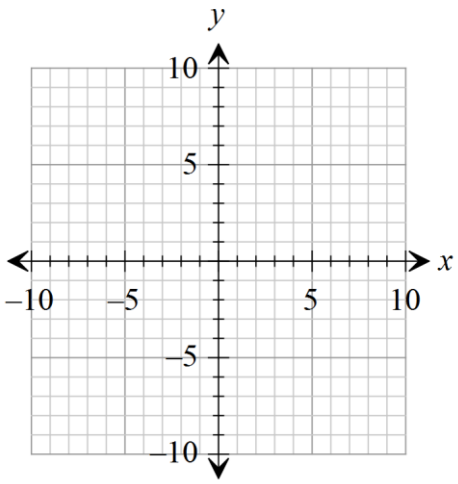
x	*f(x)*

c) **Stretches/ Compressions**

x	*f(x)*

d) **Translations (Shifts)**

x	*f(x)*



Domain:

Range:

16. $f(x)=-\frac{1}{4}|x+2|+8$

a) **Parent**

x	*f(x)*

b) **Reflections**

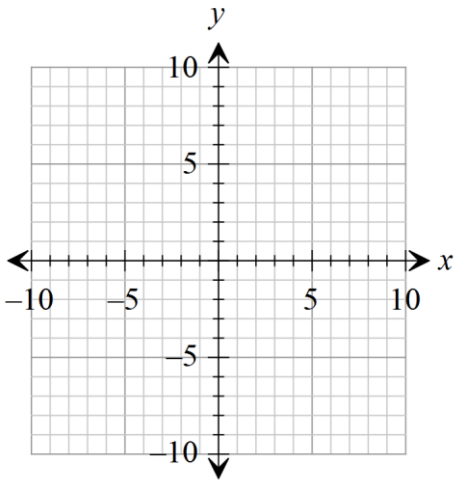
x	*f(x)*

c) **Stretches/ Compressions**

x	*f(x)*

d) **Translations (Shifts)**

x	*f(x)*



Domain:

Range: