This is $f(x) = x^3$

x	-2	-1	0	1	2
f(x)	-8	-1	0	1	8

Sketch $a(x) = 2x^3 - 16$
and complete the table below.

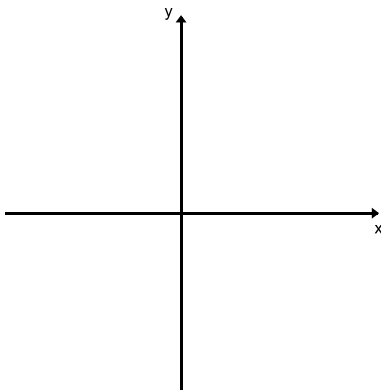| State point of inflection |
|---|
| State y intercept |
| State x intercepts |
| State two additional points |
| State the transformations on f(x) that a(x) represents |
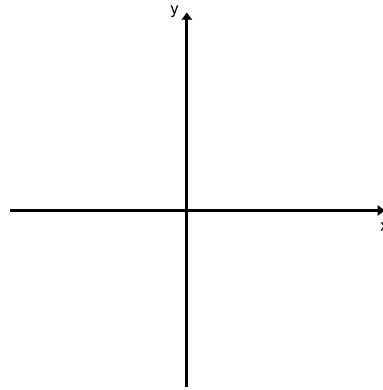
Sketch $b(x) = 5(x-1)^3 + 2$
and complete the table below.

State point of inflection
State y intercept
State x intercepts
State two additional points
State the transformations on f(x) that b(x) represents

Sketch $c(x) = -1(x-8)^3$
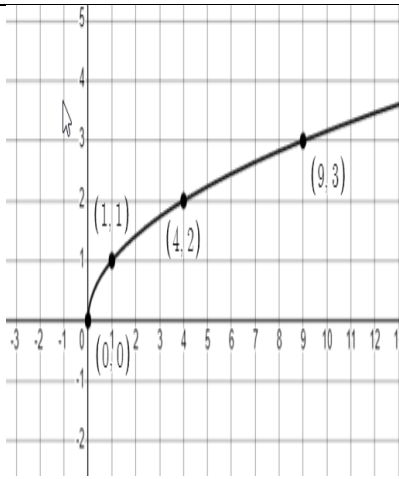and complete the table to the right

State point of inflection
State y intercept
State x intercepts
State two additional points
State the transformations on f(x) that c(x) represents

Answer these questions with a(x) b(x) or c(x) as they apply.

Which of the functions is a vertical compression?

Which of the functions is a vertical reflection?

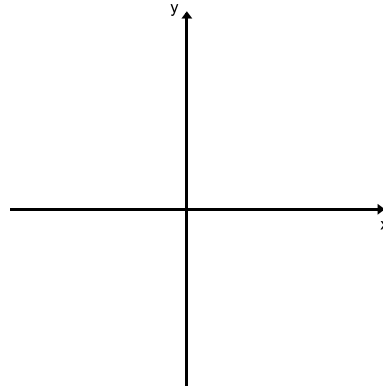Which of the functions is a vertical stretch?
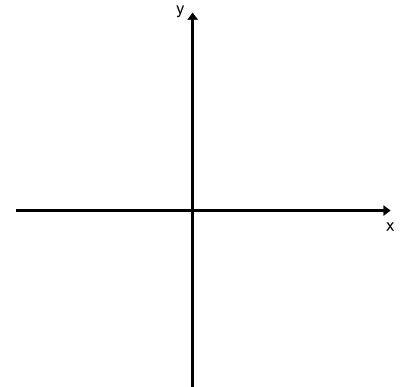
This is $f(x) = \sqrt{x}$

x	-4	-1	0	1	4
f(x)	und	und	0	1	2

Sketch a$(x) = 2\sqrt{x} - 4$
and complete the table below.

Sketch b$(x) = \frac{1}{2}\sqrt{x+8} + 6$
and complete the table below.

State extreme point
State y intercept
State x intercepts
State two additional points
State the transformations on f(x) that a(x) represents

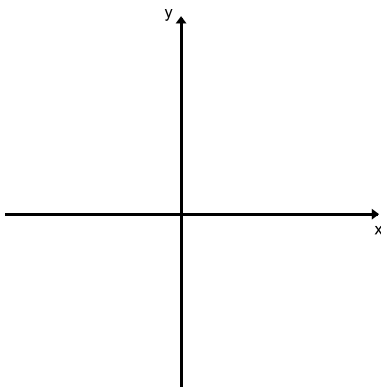| State extreme point |
|---|
| State y intercept |
| State x intercepts |
| State two additional points |
| State the transformations on f(x) that b(x) represents |

Sketch c$(x) = 2\sqrt{3 - x} + 5$
and complete the table to the right

State extreme point
State y intercept
State x intercepts
State two additional points
State the transformations on f(x) that c(x) represents

Answer these questions with a(x) b(x) or c(x) as they apply.

Which of the functions is a vertical compression?

Which of the functions is a vertical reflection?

Which of the functions is a vertical stretch?

Which of the functions is a horizontal reflection?