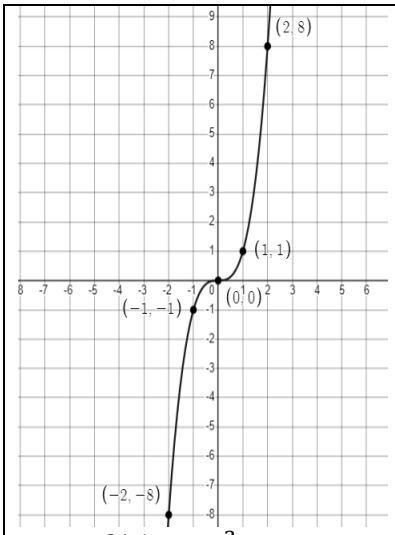
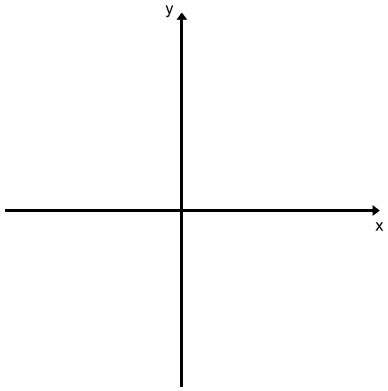
Name_____HWK Transformations of Basic Functions 2 Hour_____



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

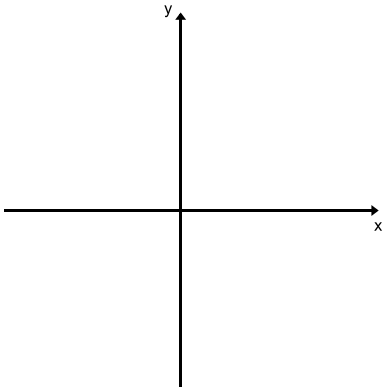
x	-2	-1	0	1	2
f(x)	-8	-1	0	1	8

Sketch a$(x) = 2x^3 - 5$
and complete the table below.



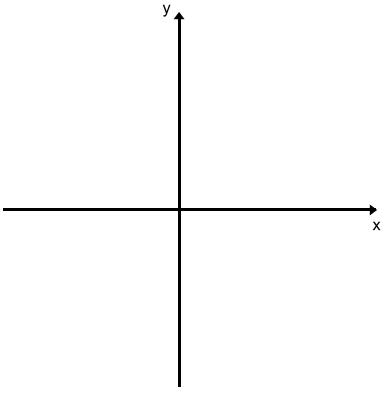
State point of inflection
State y intercept
State x intercepts
State two additional points

Sketch b$(x) = -2(x+4)^3 - 5$
and complete the table below.



State point of inflection
State y intercept
State x intercepts
State two additional points

Sketch c$(x) = \frac{1}{2}(x-8)^3$
and complete the table to the right



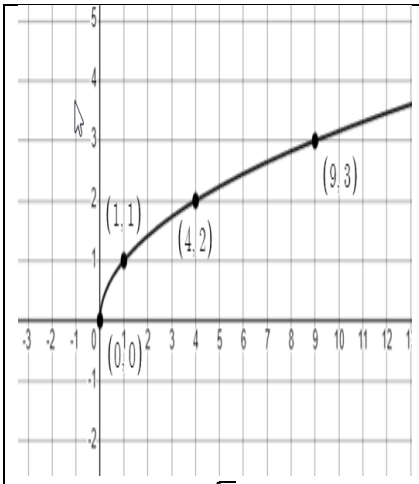
State point of inflection
State y intercept
State x intercepts
State two additional points

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?

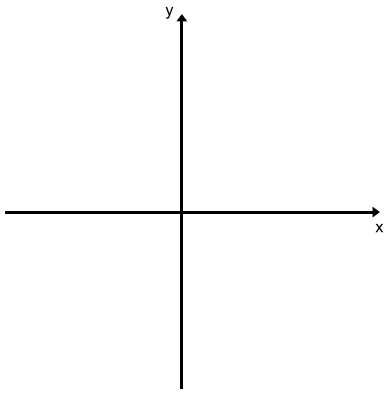
Which of the functions is a vertical stretch?



This is $f(x) = \sqrt{x}$

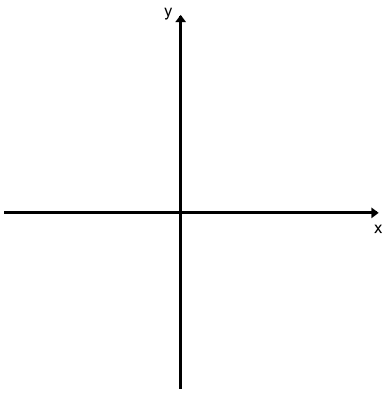
x	-4	-1	0	1	4
f(x)	und	und	0	1	2

Sketch a$(x) = -3\sqrt{x} + 5$
and complete the table below.



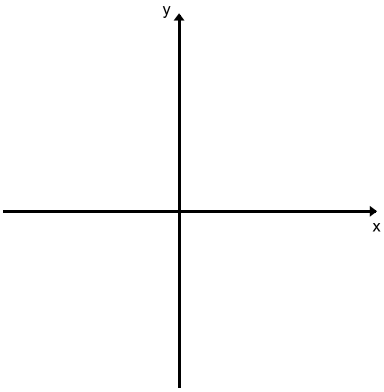
State extreme point
State y intercept
State x intercepts
State two additional points

Sketch b$(x) = \frac{3}{2}\sqrt{x+6} - 4$
and complete the table below.



State extreme point
State y intercept
State x intercepts
State two additional points

Sketch c$(x) = \frac{-1}{4}\sqrt{6-x} + 4$
and complete the table to the right



State extreme point
State y intercept
State x intercepts
State two additional points

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