

ALG 2

Fcn Fams Unit Part II

Transformations Practice

Using "a"

Name:

Hour:

Key

For 1-6: a) Give the equation of the parent fcn

b) Describe the transformation using the proper vocab.
Include vertical when needed and the numeric factor.

1. $f(x) = -\frac{2}{3}\left(\frac{1}{2}\right)^x$

a) $f(x) = \left(\frac{1}{2}\right)^x$

b) vertical reflection

vertical shrink of $\frac{2}{3}$

2. $f(x) = 10x$

a) $f(x) = x$

b) vertical

stretch of 10

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

a) $f(x) = \sqrt{x}$

b) vertical stretch of $\frac{3}{2}$

4. $f(x) = -8x^2$

a) $f(x) = x^2$

b) vertical
reflection

vertical stretch of 8

5. $f(x) = -\log x$

a) $f(x) = \log x$

b) vertical
reflection~~vertical stretch~~

6. $f(x) = \frac{3}{4}|x|$

a) $f(x) = |x|$

b) vertical/shrink of $\frac{3}{4}$

For 7-9, write the eqn based on the given info.

7. parent fcn: $f(x) = 2^x$ with a vertical reflection and
a vertical stretch of 8 $a = -8$

$$f(x) = -8 \cdot 2^x \quad (\text{btw, it does NOT} = -16^x)$$

8. parent fcn: $f(x) = \sqrt[3]{x}$ with a vertical shrink of $\frac{1}{5}$
 $a = \frac{1}{5}$

$$f(x) = \frac{1}{5} \sqrt[3]{x}$$

9. parent fcn: $f(x) = x^3$ where $a = -6$

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