

FUNCTION FAMILIES PART II RETAKE REVIEW

Key

Alg 2

Function Families

Describing Transformations

For each problem, give the parent function, tell what a,b,h,k are, then describe the transformations using the proper vocabulary: stretch/shrink/reflection/translation/horizontal/vertical/#'s w/ R,L,U,D

1. Parent Fcn: $f(x) = x^3$ $f(x) = 5(x+3)^3 - 7$

a = 5 vertical stretch of 5

b = 1 —

h = -3 translation 3L

k = -7 translation 7D

2. Parent Fcn: $g(x) = \log x$ $g(x) = \log(-x) - 5$

a = 1 —

b = -1 horizontal reflection

h = 0 —

k = -5 translation 5D

3. Parent Fcn: $h(x) = 2^x$ $h(x) = 3(2)^{x-7} + 8$

a = 3 vertical stretch of 3

b = 1 —

h = 7 translation 7R

k = 8 translation 8U

4. Parent Fcn: $f(x) = |x|$ $f(x) = \frac{1}{5}|x-2| + 6$

a = 1 —

b = $\frac{1}{5}$ horizontal stretch of 5

h = 2 translation 2R

k = 6 translation 6U

5. Parent Fcn: $g(x) = \sqrt[3]{x}$ $g(x) = -\frac{2}{3}\sqrt[3]{4x} - 1$

a = $-\frac{2}{3}$ vertical reflection, vertical shrink of $\frac{2}{3}$

b = 4 horizontal shrink of $\frac{1}{4}$

h = 0 —

k = -1 translation 1D

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