

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 / R,L,U,D

8. Parent Fcn:  $g(x) = \sqrt{x}$        $g(x) = 3\sqrt{x - 4}$

a = 3    Vertical shrink of .3

b = 1    —

h = 4    Translation 4R

k = 0    —

9. Parent Fcn:  $f(x) = \log x$        $f(x) = \log(x + 2) - 1$

a = 1    —

b = 1    —

h = -2    Translation 2L

k = -1    Translation 1D

10. Parent Fcn:  $h(x) = |x|$        $h(x) = -|x| + 3$

a = -1    Vertical reflection (or reflection over x-axis)

b = 1    —

h = 0    —

k = 3    Translation 3U

11. Parent Fcn:  $g(x) = \sqrt[3]{x}$        $g(x) = \sqrt[3]{5x} - 8$

a = 1    —

b = 5    Horizontal shrink of  $\frac{1}{5}$

h = 0    —

k = -8    Translation 8D

12. Parent Fcn:  $f(x) = x^2$        $f(x) = 3(x - 5)^2$

a = 3    Vertical stretch of 3

b = 1    —

h = 5    Translation 5R

k = 0    —