

Transformations of Parent Functions Practice

① $c(x) = x^2 + 3$ up 3

② $d(x) = \sqrt{x - 4}$ right 4

③ $e(x) = (x + 4)^3 + 5$
left 4 up 5

④ $f(x) = 3 - 2x^3$
rewrite as: $-2x^3 + 3$ up 3
flipped, stretch by factor of 2

⑤ $g(x) = \sqrt{x + 4} - 3$
left 4, down 3

⑥ $h(x) = -\left(\frac{1}{4}\right)(x + 2)^2 - 5$
flipped, compressed by factor of $\frac{1}{4}$
left 2, down 5

⑦ $j(x) = -2|x + 1|$
flipped, stretched factor of 2
left 1

⑧ $k(x) = 5x^2$
stretched by factor of 5

⑨ $m(x) = -\sqrt{x}$
flipped

⑩ $n(x) = 8 - |x + 5|$
or $-|x + 5| + 8$
flipped, left 5, up 8

⑪ $p(x) = 2(x - 1)^2 + 3$
stretched factor of 2
right 1, up 3

⑫ $q(x) = \sqrt{x + 5}$
shifted up 5

⑬ $r(x) = \frac{3}{4}|x - 4|$
compressed by factor of $\frac{3}{4}$
right 4

⑭ $s(x) = (x + 1)^2 + 4$
left 1 up 4

⑮ $t(x) = -\frac{5}{4}\sqrt{x + 3}$

flipped, stretched by factor of $\frac{5}{4}$ (b/c $\frac{5}{4} > 1$), up 3