

Transforming Functions

Identify each parent function, then describe the transformations.

1. $y = \frac{1}{3} \left(\frac{1}{5} \right)^{-(x-9)} + 2$

2. $y = (x+7)^3 + 3$

3. $y = -|2x| - 3$

4. $y = \frac{2}{5}x + 8$

5. $y = -\sqrt{x-8}$

6. $y = \frac{1}{5}(x-4)^2 + 1$

7. $y = \sqrt[3]{3(x+1)} + 7$

8. $y = (2)^{4(x+10)}$

9. $y = \frac{2}{11} \log x + 10$

10. $y = \frac{1}{3}x^5 - 2$

$y = a f(b(x-h)) + k$ ← coefficient on x, INSIDE the function

* Put this on sheet provided

$a =$ _____

$b =$ _____ (skip for now)

$h =$ _____

$k =$ _____



#'s go there



descriptors go there

If a or b are not "there", they = 1

If h or k are not "there", they = 0

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: _____

$a =$ _____

$b =$ _____

$h =$ _____

$k =$ _____

2. Parent Fcn: _____

$a =$ _____

$b =$ _____

$h =$ _____

$k =$ _____

3. Parent Fcn: _____

$a =$ _____

$b =$ _____

$h =$ _____

$k =$ _____

4. Parent Fcn: _____

$a =$ _____

$b =$ _____

$h =$ _____

$k =$ _____

5. Parent Fcn: _____

$a =$ _____

$b =$ _____

$h =$ _____

$k =$ _____

Alg 2

Function Families

Describing Transformations

6. Parent Fcn: _____

a = _____

b = _____

h = _____

k = _____

7. Parent Fcn: _____

a = _____

b = _____

h = _____

k = _____

8. Parent Fcn: _____

a = _____

b = _____

h = _____

k = _____

9. Parent Fcn: _____

a = _____

b = _____

h = _____

k = _____

10. Parent Fcn: _____

a = _____

b = _____

h = _____

k = _____