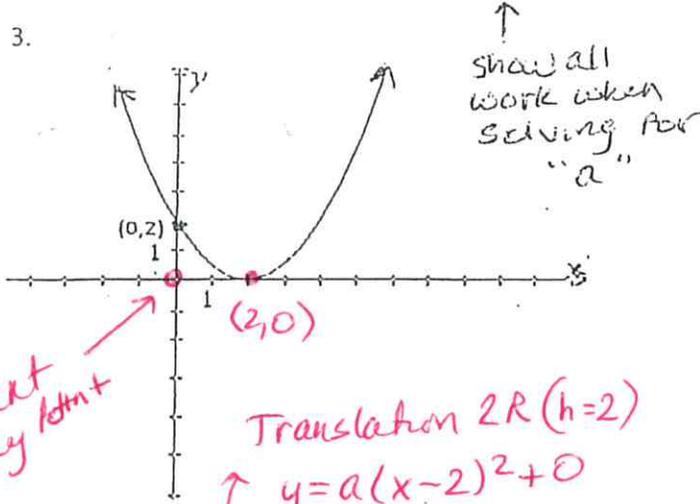


Describe the transformations and write the equation for the following graphs:

3.



Parent key point

show all work when solving for "a"

Translation 2R (h=2)

$$y = a(x-2)^2 + 0$$

$$2 = a(0-2)^2$$

$$2 = a(-2)^2$$

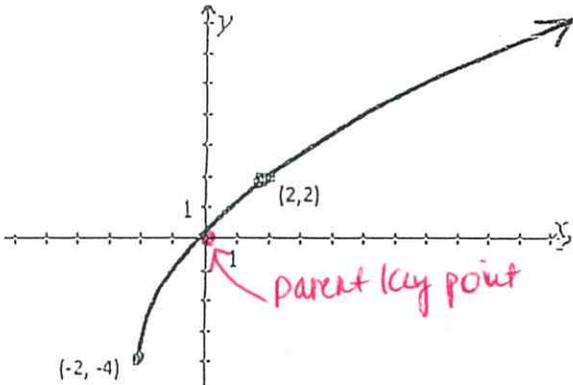
$$2 = \frac{a(4)}{4} \quad a = \frac{1}{2}$$

Parent Transformations

Equation

$$y = \frac{1}{2}(x-2)^2$$

5.



parent key point

Parent

$$y = \sqrt{x}$$

h=-2 k=-4

Transformations

Translation 2L, 4D

$$y = a\sqrt{x-2} - 4$$

$$y = a\sqrt{x+2} - 4$$

$$(2, 2) \quad 2 = a\sqrt{2+2} - 4$$

$$2 = a\sqrt{4} - 4$$

$$2 = 2a - 4$$

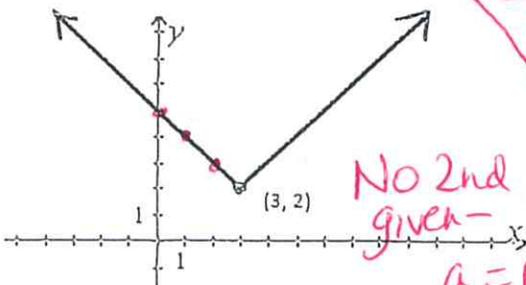
$$\frac{2a = 6}{2}$$

$$a = 3$$

Equation

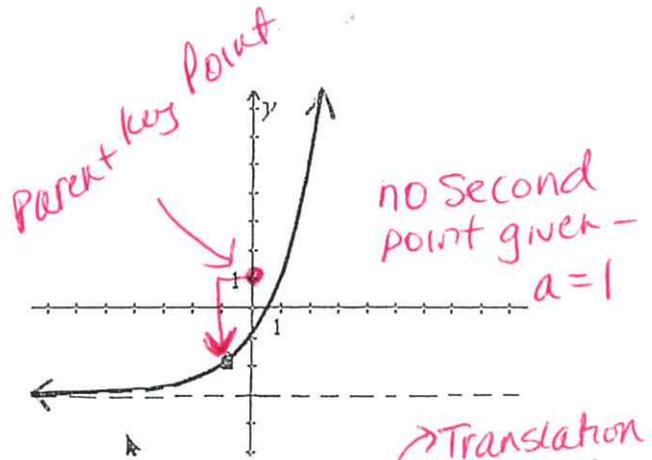
$$y = 3\sqrt{x+2} - 4$$

7.



No 2nd point given -  
a=1

4.



Parent key point

no second point given -  
a=1

Parent Transformations

$$y = 2^x$$

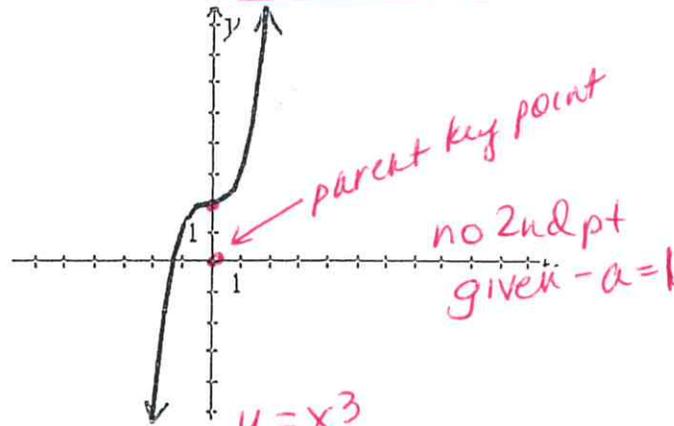
Translation 1L, 3D (h=-1, k=-3)

Equation

$$y = 2^{x-1} - 3$$

$$y = 2^{x+1} - 3$$

6.



parent key point

no 2nd pt given - a=1

Parent

$$y = x^3$$

Transformations

Translation 2up  
k=2

Equation

$$y = x^3 + 2$$

Parent

$$y = |x|$$

Transformations

Translation 3R, 2u

h=3, k=2

Equation

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