Algebra 2 - Additional Practice

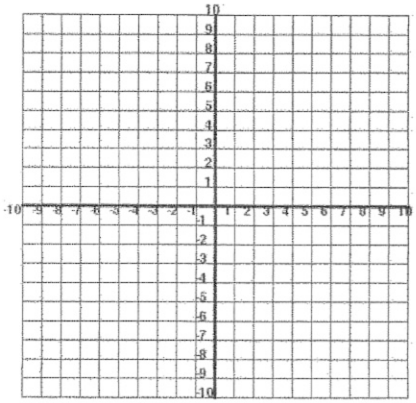
2.2.2 - Transforming Parent Functions Practice 3

Name_____

Date_____ Period_____

For each, write the equation for the parent function and the general equation for graphing form next to each coordinate plane. State the locator point and then graph the transformation of the parent graph.

1) $f(x)=\frac{1}{2}(x+2)^2+5$



Parent Equation:

_____

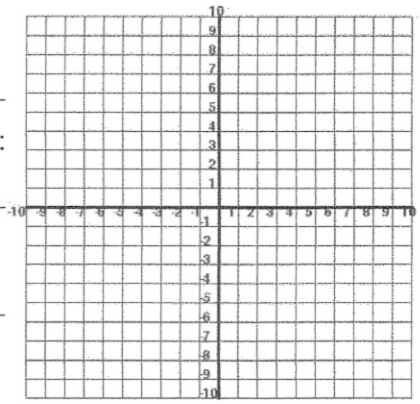
General Graphing Form:

_____

Locator Point (h, k):

_____

2) $f(x)=-(x-3)^2-4$



Parent Equation:

_____

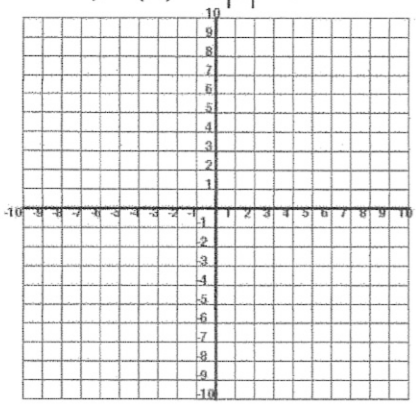
General Graphing Form:

_____

Locator Point (h, k):

_____

3) $f(x)=2|x|-1$



Parent Equation:

_____

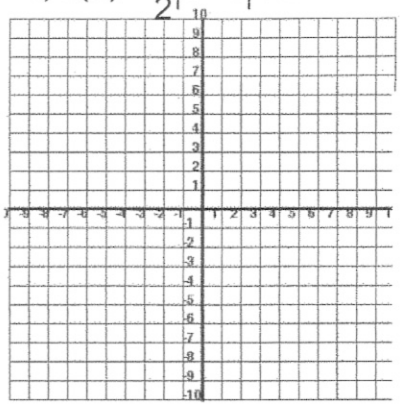
General Graphing Form:

_____

Locator Point (h, k):

_____

4) $f(x)=\frac{1}{2}|x-3|+2$



Parent Equation:

_____

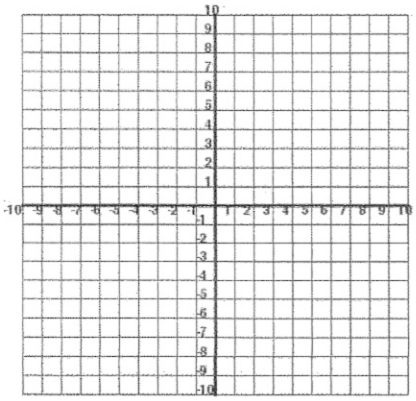
General Graphing Form:

_____

Locator Point (h, k):

_____

5) $f(x)=-2|x-2|$



Parent Equation:

_____

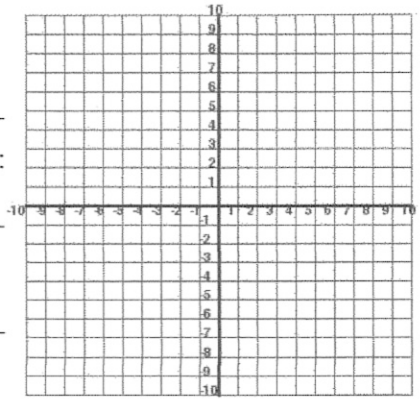
General Graphing Form:

_____

Locator Point (h, k):

_____

6) $f(x)=\sqrt{x+3}-2$



Parent Equation:

_____

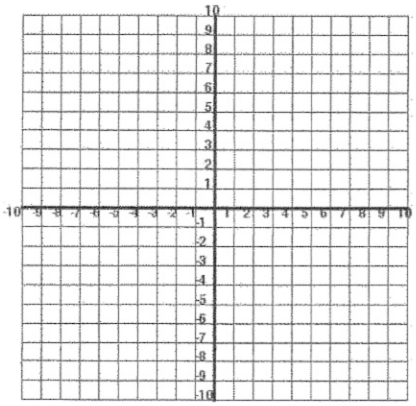
General Graphing Form:

_____

Locator Point (h, k):

_____

7) $f(x) = 2\sqrt{x}$

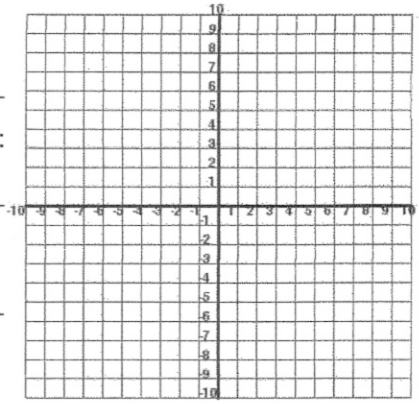


Parent Equation: _____

General Graphing Form: _____

Locator Point (h, k): _____

8) $f(x) = 2\sqrt{x+1} - 2$

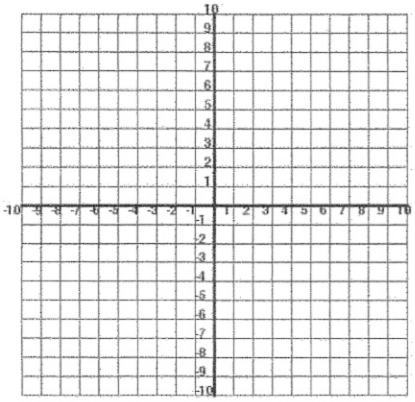


Parent Equation: _____

General Graphing Form: _____

Locator Point (h, k): _____

9) $f(x) = \dfrac{1}{x-2} + 3$

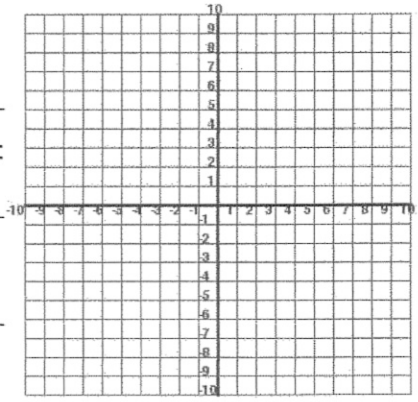


Parent Equation: _____

General Graphing Form: _____

Locator Point (h, k): _____

10) $f(x) = \dfrac{1}{x+3} + 2$

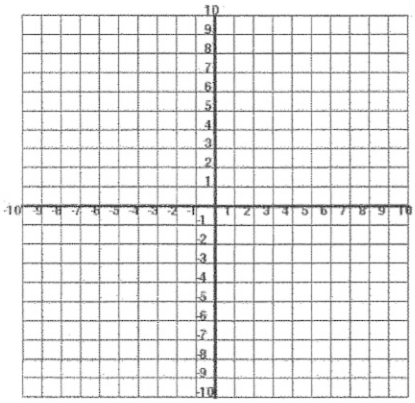


Parent Equation: _____

General Graphing Form: _____

Locator Point (h, k): _____

11) $f(x) = (2)^{x-2} + 1$

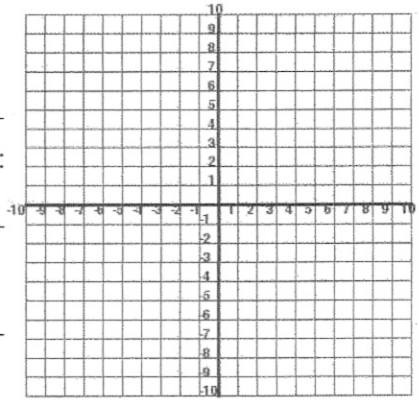


Parent Equation: _____

General Graphing Form: _____

Locator Point (h, k): _____

12) $f(x) = -(2)^{x} - 2$



Parent Equation: _____

General Graphing Form: _____

Locator Point (h, k): _____

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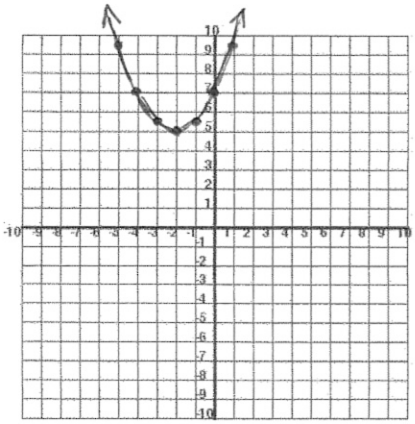
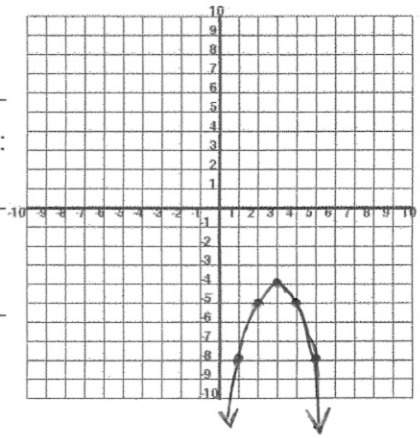


Parent Equation: $y=x^2$

General Graphing Form: $y=a(x-h)^2+k$

Locator Point (h, k): $(-2,5)$

2) $f(x)=-(x-3)^2-4$

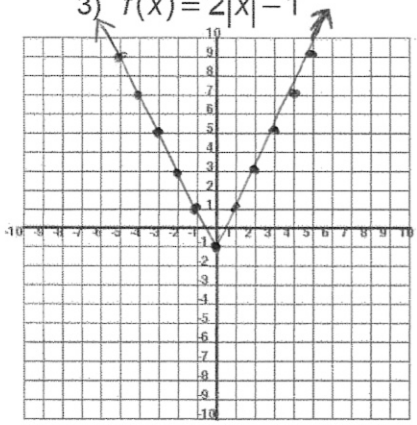


Parent Equation: $y=x^2$

General Graphing Form: $y=a(x-h)^2+k$

Locator Point (h, k): $(3,-4)$

3) $f(x)=2|x|-1$

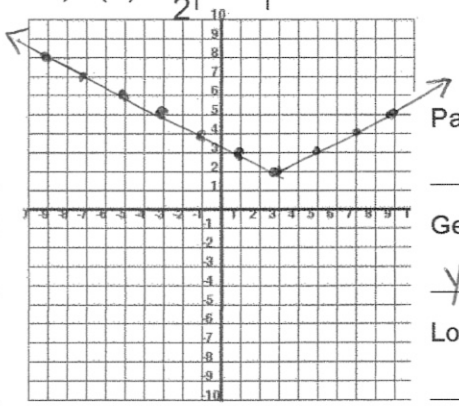


Parent Equation: $y=|x|$

General Graphing Form: $y=a|x-h|+k$

Locator Point (h, k): $(0,-1)$

4) $f(x)=\frac{1}{2}|x-3|+2$

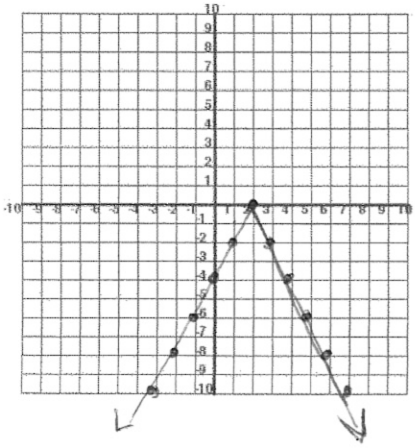


Parent Equation: $y=|x|$

General Graphing Form: $y=a|x-h|+k$

Locator Point (h, k): $(3,2)$

5) $f(x)=-2|x-2|$

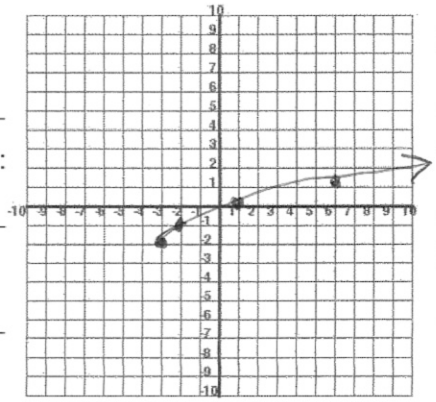


Parent Equation: $y=|x|$

General Graphing Form: $y=a|x-h|+k$

Locator Point (h, k): $(2,0)$

6) $f(x)=\sqrt{x+3}-2$

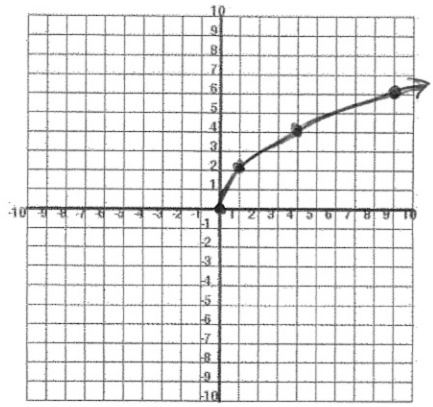


Parent Equation: $y=\sqrt{x}$

General Graphing Form: $y=a\sqrt{x-h}+k$

Locator Point (h, k): $(-3,-2)$

7) $f(x) = 2\sqrt{x}$

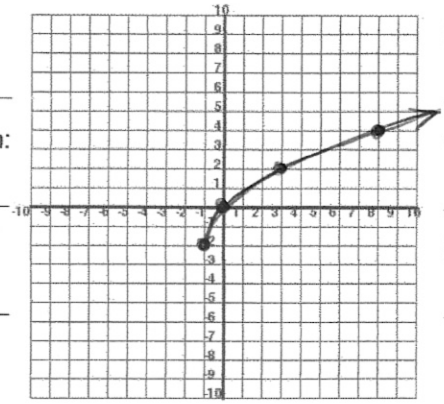


Parent Equation: $y = \sqrt{x}$

General Graphing Form: $y = a\sqrt{x-h} + k$

Locator Point (h, k): $(0, 0)$

8) $f(x) = 2\sqrt{x+1} - 2$

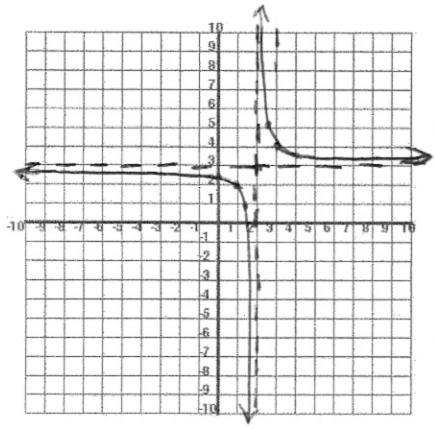


Parent Equation: $y = \sqrt{x}$

General Graphing Form: $y = a\sqrt{x-h} + k$

Locator Point (h, k): $(-1, -2)$

9) $f(x) = \dfrac{1}{x-2} + 3$

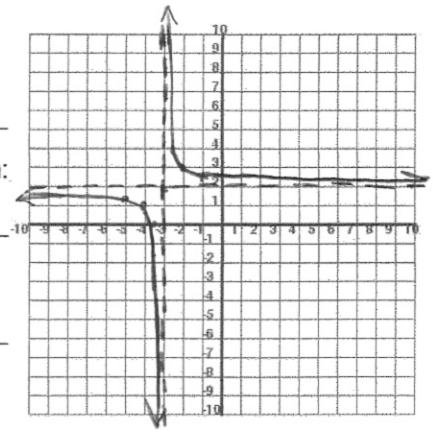


Parent Equation: $y = \frac{1}{x}$

General Graphing Form: $y = a\left(\frac{1}{x-h}\right) + k$

Locator Point (h, k): $(2, 3)$

10) $f(x) = \dfrac{1}{x+3} + 2$

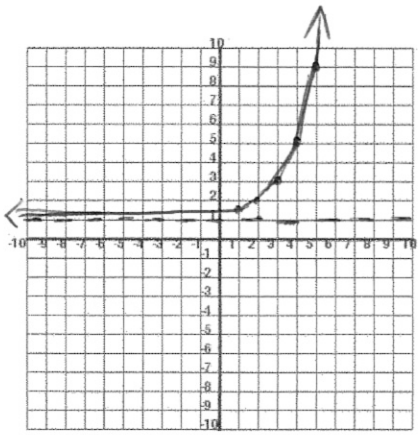


Parent Equation: $y = \frac{1}{x}$

General Graphing Form: $y = a\left(\frac{1}{x-h}\right) + k$

Locator Point (h, k): $(-3, 2)$

11) $f(x) = (2)^{x-2} + 1$

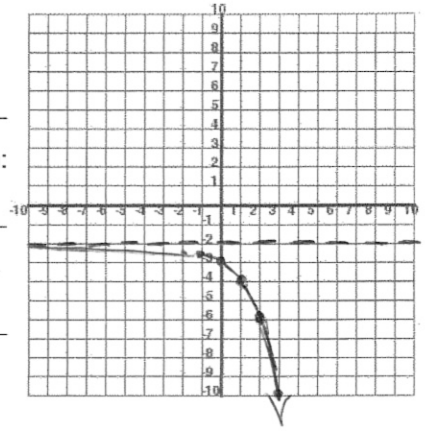


Parent Equation: $y = 2^x$

General Graphing Form: $y = ab^{x-h} + k$

Locator Point (h, k): $(2, 1)$

12) $f(x) = -(2)^x - 2$



Parent Equation: $y = 2^x$

General Graphing Form: $y = ab^{x-h} + k$

Locator Point (h, k): $(0, -2)$