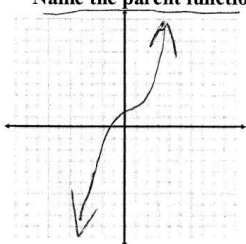
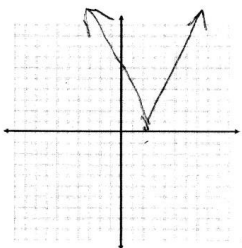


Name the parent function, describe the transformation represented, AND sketch the graph.



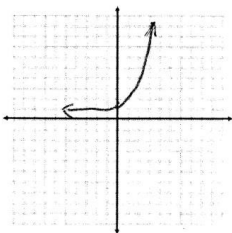
1. $g(x) = x^3 + 1$ Parent: CUBIC

Transformations: UP ONE



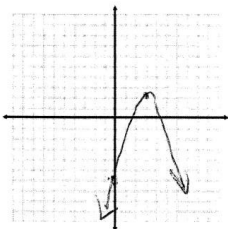
2. $f(x) = 3|x-2|$ Parent: ABSOLUTE VALUE

Transformations: 3-NARROW 2 TO THE RIGHT



3. $h(x) = 3^x + 1$ Parent: EXPONENTIAL

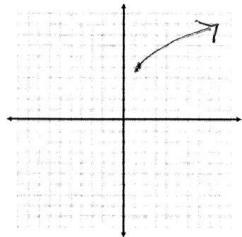
Transformations: UP ONE



4. $g(x) = -(x-3)^2 + 2$ Parent: QUADRATIC

Transformations: flip (-) to right 3 up 2

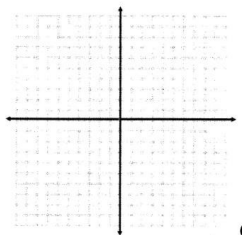
Key



5. $f(x) = \sqrt{x-1} + 4$

Parent: SQUARE ROOT

Transformations: Right 1 UP 4



6. $f(x) = \frac{1}{x} - 3$

Parent: RATIONAL

Transformations: Down 3

#7-10: Given the parent function and a description of the transformation, write the equation of the transformed function, $f(x)$.

7. Rational - vertical shift up 5

$\frac{1}{x} + 5$

8. Absolute Value - flipped over the x axis, horizontal shift left 3, vertical shift up 2

$-|x+3| + 2$

9. Square Root - vertical shift down 3

$\sqrt{x} - 3$

10. Quadratic - vertical stretch by 2, horizontal shift left 1, vertical shift down 7.

$2(x+1)^2 - 7$