

AA PREP: GRAPHING WITH TRANSFORMATIONS—WORKSHEET #1 KEY

Graph each of the following functions using transformations.

1. $f(x) = -(x+4)^2 + 1$ QUADRATIC

PARENT:
 $y = x^2$

REFLECTION
OVER
X-AXIS

4 Ⓛ
1 Ⓢ

2. $g(x) = \frac{1}{2}|x-5|$ ABSOLUTE-VALUE

PARENT:
 $y = |x|$

V COMP $x \frac{1}{2}$

5 Ⓢ

3. $y = 2\sqrt{x+1} - 3$ SQUARE ROOT

PARENT:
 $y = \sqrt{x}$

V STRETCH $\times 2$

1 Ⓛ
3 Ⓢ

4. $f(x) = 2^{x-1} + 3$ EXPONENTIAL

PARENT:
 $y = 2^x$

1 Ⓢ
3 Ⓢ

$y = 3$

5. $y = -x^3 + 2$ CUBIC

PARENT:
 $y = x^3$

REFLECTION
OVER
X-AXIS

2 Ⓢ

6. $g(x) = \frac{1}{x+5} - 2$ RATIONAL

PARENT:
 $y = \frac{1}{x}$

5 Ⓛ
2 Ⓢ

$y = -2$

$x = -5$