**ALGEBRA ONE NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**TRANSFORMATIONS PRACTICE**

Write the parent function and describe the transformation.

|  |  |  |
| --- | --- | --- |
| 1. f(x) = - 2 | 2. f(x) = x – 7  | 3. y = 2 x + 4 |
| 4. f(x) = (x – 5)3 + 8 | 5. y =  | 6. f(x) = -10 |

Sketch the graph of each function*. For all graphs in this exercise, you may need to extend the given coordinate grid.*

7. y = (x + 1)3 + 2 8. f(x) = |x – 2| 9. y = $\sqrt{x-3}+4$

y

x

5

5

-5

-5

y

x

5

5

-5

-5

y

x

5

5

-5

-5

For each graph below, write the parent function and the equation of the graph shown.

|  |  |  |
| --- | --- | --- |
| 10. parent: f(x) =graph below f(x) = | 11. parent: f(x) =graph below f(x) = | 12. parent: f(x) =graph below f(x) = |

y

x

5

5

-5

-5

y

x

5

5

-5

-5

y

x

5

5

-5

-5

13. What is the parent function of the relationship shown in the table? (Hint: you can

|  |  |
| --- | --- |
| x | y |
| -3 | 13 |
| -2 | 8 |
| -1 | 5 |
| 0 | 4 |
| 1 | 5 |
| 2 | 8 |
| 3 | 13 |

 use common differences to find out!)

 What is the transformation from the parent function?

Review: Solve the following equations. Show all of your steps.

|  |  |
| --- | --- |
| 1. 3A + 6B= -8, solve for A.
 | 1. 3x - 7 = 3(2 - x)
 |
| 1. 9m – 5 – 4m = 6
 | 1. $\frac{3}{x-3}=\frac{4}{7}$
 |