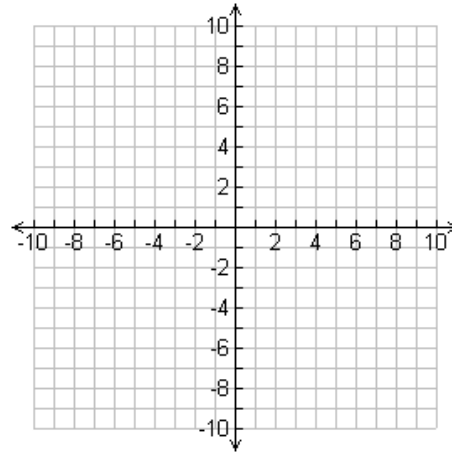
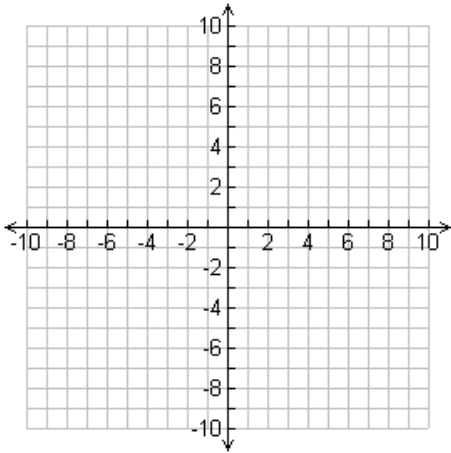


Unit 3: Comparing Functions - Modeling & Transformations
PRE-TEST

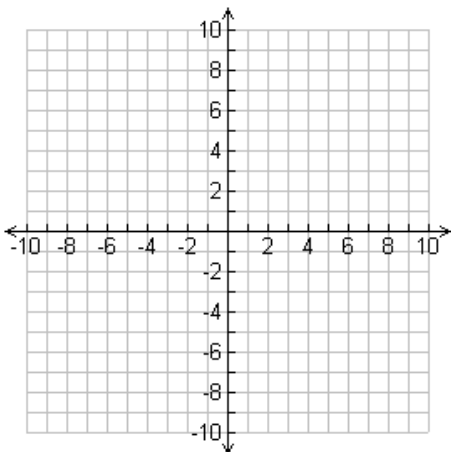
Graph the given set of data on the given coordinate plane.

Then identify if the information follows a linear, exponential, or quadratic model.

1. $(1, -4), (2, -2), (3, -1), (4, 0), (5, 2), (6, 4)$ 2. $(1, 4), (2, 6), (3, 7), (4, 7), (6, 5), (8, 1)$



3. $(2, 10), (3, 6), (4, 5), (6, 2), (10, \frac{1}{2})$



Rewrite the given equation applying the given transformation:

4. $y = 4x$; translated down 5 units, and reflected over the x-axis.

5. $y = 3(2)^x$; translated 3 units to the left, and up 6 units.

6. $y = -\frac{1}{2}x^2$; translated 8 units to the right, and down 4 units.

**In this section you are given some points on the line of best fit from an ungiven scatter plot.
Use the given points to find the equation of the line:**

7. Linear:

(2, 4) and (-6, 8)

8. Exponential:

(-3, 162) and (1, 2)

9. Quadratic:

$(2, 5)$, $(-1, -28)$, and $(6, -35)$