

5.1.2 Reflect and Apply

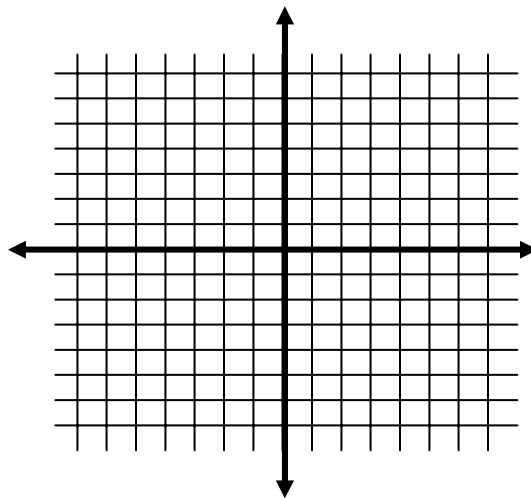


Apply your knowledge from the Fade Away experiment to answer the following questions:

- 1) Identify which variable is the Dependent Variable, and explain your reasoning.

- 2) Identify which variable is the Independent Variable, and explain your reasoning.

- 3) Sketch the graph of this relationship. Be sure to label the axes appropriately.



- 4) What is a reasonable Domain and Range for this experiment?
(Keep in mind the parent function!)

Domain: _____ Range: _____

5) Assume that the equation for the experiment is $y = \frac{115,000}{x^2}$, Show your calculations to find the following values:

(a) Find the **Intensity** of the light at 8 cm.

(b) Find the **Intensity** of the light at 90 cm.

(c) Find the **distance** of the light source when the intensity is 54 Lux.

(d) Find the **distance** of the light source when the intensity is 5 Lux.

6) On the graph below, *graph a* represents the data collected from Fade Away. Provide an explanation of what caused *graph b* to shift. **Be specific.**

