Pre-Activity Quiz Answer Key

Complete the following problems. Show your work.

1. Calculate the slope of a line with points (4, -1) and (2, 3).
   
   Answer:
   
   \[ m = \frac{y_1 - y_2}{x_1 - x_2} = \frac{1 - 3}{4 - 2} = \frac{-2}{2} = -1 \]

2. Determine the equation of this line using the points above.
   
   Answer:
   
   \[ y = mx + b \]
   \[ 3 = (-1)(2) + b \]
   \[ 3 = 4 + b \]
   \[ b = 7 \]
   \[ y = 2x + 7 \]

3. What do you know about force? What is a force?
   
   Example answer: A force is a push or pull on an object due to its interaction with another.