Name _____ Date _____

# Comparing Properties of Two Functions - Step-by-Step Lesson

**1. Compare the following functions to determine which has a greater rate of change.**

**Function 1: $y = 3x + 5$**

**Function 2:**

| x | -2 | 0 | 4 |
|---|---|---|---|
| y | -4 | -2 | 2 |

**Explanation:**

**The equation of a straight line is $y = mx + b$**

**Slope is the rate of change. The coefficient of x is the slope of the line.**

**The slope of function number 1 is 3; given in the question.**

**Calculate the slope of function number 2:**

**Using the first two points: (-2, -4) and (0, -2)**

**Slope** $= \dfrac{y_2 - y_1}{x_2 - x_1}$

**Slope** $= \dfrac{-2 - (-4)}{0 - (-2)}$

**Slope** $= \dfrac{-2 + (4)}{2}$

**Slope = 1**

**Answer is: The slope (rate of change) of function number 1 is greater.**