

## 2-6 Context

Name \_\_\_\_\_

Per. \_\_\_\_

Find the **rate of change** and identify the **type** of function.

1. In Physics class, you must make a table of data for your lab on gravity. Here is data you collected comparing time and height of a ball that was dropped from 15 feet in the air.

Time in Seconds	Height in Feet
0	15
0.1	14.84
0.2	14.36
0.3	13.56
0.4	12.44

Do the time and height values represent a linear relationship? **SHOW** why or why not.

**IF LINEAR**, describe the rate of change in words and predict the height after 0.7 seconds.

2. You see a sign on a taxicab after school, which says that it has an initial charge of \$4, and then charges \$2.50 for each mile.

Do the number of miles driven and the amount of money it costs represent a linear relationship? **SHOW** why or why not.

**IF LINEAR**, describe the rate of change in words and predict the cost of driving six miles in the cab.

3. Tom Bundran has been trying to get elected onto the School Board for the past month. He had 25 supporters during his first week and the number of supporters has been doubling each week since then.

Does the number of weeks and the number of supporters represent a linear relationship? **SHOW** why or why not.

**IF LINEAR**, describe the rate of change in words and predict the number of supporters Tom will have after eight weeks.

4. There were eight advertisers placing ads in the school newspaper in 2005. In 2007, there were 16 advertisers placing ads in the school newspaper. In 2010, there were 28 advertisers placing ads in the school newspaper.

Does the number of advertisers and the number of years since 2005 represent a linear relationship? **SHOW** why or why not.

**IF LINEAR**, describe the rate of change in words and predict the number of advertisers there are in 2012.