**~ Direct Variation in the REAL World ~** Names:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



 **An iPod Nano can hold up to 16 gigabytes (GB) of data.**

1) How many gigabytes can be stored on 0 iPod Nanos? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 12?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2) If you have enough iPod Nanos to hold 80 GB, how many of them do you have? \_\_\_\_\_\_\_\_

3) Fill in the table:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| X (# of iPods) | 0 | 2 |  |  | 25 |
| Y (total GB) |  |  | 64 | 160 |  |

4) What is the direct variation equation (in the terms of y=kx)? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5) Based on this problem, answer the following. (Hint: Refer to the table in #3.)

 a. In words, what does the input (x) represent? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 b. In words, what does the output (y) represent? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 c. In words, what does the constant (k) represent? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6) As the number of iPod Nanos increases, the total number of gigabytes \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

7) Look at the values in the table on #3. Write each set of (x,y) values as an ordered pair.

 (0, 0) (2, ) \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

8) Graph these ordered pairs below. **Gigabytes on iPod Nanos**

 200

 150

 Total gigabytes

 100



 50

 5 10 15 20 25

 # iPod Nanos