Name Date Period

**Identifying Independent and Dependent Variables**

To identify independent and dependent variables, use the sentence:

The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ variable depends on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ variable.

*y*

*x*

*For each situation, name the independent and dependent quantity and write a sentence using*

*the independent and dependent parts of each statement.*

1. **Number of left-handed people in a group / total number of people in the group**

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ depends on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Independent: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dependent: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Number of magazines sold / the profit made selling magazines**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is determined by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Independent: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dependent: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.) **A student’s attendance / their grade**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ depends on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Independent: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dependent: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4.) **The area of a square / the length of a side**

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ depends on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Independent: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dependent: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **The weight of a book / the number of pages**

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a function of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Independent: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dependent: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 *Match each sentence with the correct graph.*

\_\_\_\_\_ 6.) My height is a function of my age.

\_\_\_\_\_ 7.) The height of the football depends on how many seconds have gone by since it was kicked.

\_\_\_\_\_ 8.) The amount of money made at a foot ball game is determined by the number of tickets sold.

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D) E) F)

 Money Height Time

*Use the words given below to write your own sentences describing an independent/dependent relationship.*

 9.) depends on .

10.) causes .

11.) determines .

*Identify each situation by underlining the INDEPENDENT statement and circling the*

*DEPENDENT statement. Write the “depends on” statement first.*

12.) The length of time you have been driving determines how much gas remains in the car’s

 tank.

13.) The number of cavities you have depends on how well you take care of your teeth.

14.) The type of clothes you have in your closet relies on whether you are a boy or a girl.

15.) The amount of sunlight determines how green a plant is.

*Identify the independent and dependent quantity.*

1. On average, Kyla drives 25 miles in 1 hour. The function m = 25h represents the

 number of miles, *m*, she can drive in *h* hours.

 Independent quantity \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Independent variable \_\_\_\_\_\_

 Dependent quantity \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dependent variable \_\_\_\_\_\_\_\_

17.) Normally Jacob writes 5 pages in 1 hour. The function p = 5h represents the number of

 pages, *p*, he can write in *h* hours.

 Independent quantity \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Independent variable \_\_\_\_\_\_

 Dependent quantity \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dependent variable \_\_\_\_\_\_\_\_

1. On average, Christian runs about 6 miles in one hour. The equation *m = 6h* represents

 the number of miles, *m*, Christian can run in *h* hours.

 Independent quantity \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Independent variable \_\_\_\_\_\_

 Dependent quantity \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dependent variable \_\_\_\_\_\_\_\_