#145

Name: _____ Period: _____

Direct Variation Worksheet

Where is the **y–intercept** of any direct variation equation? _____

A
B
C

1) Circle the equation that is NOT an example of direct variation.

A) $y = \frac{-7}{3}x + 1$ B) $y = \frac{5}{16}x$ C) y = 4x D) y = –9x

A
B
C

2) Circle the equation that *is* a direct variation equation.

A) y = 7 – 3x B) $y = -8x + 1$ C) $y = \frac{5}{6}x$ D) $y = -2x + 1$

Acc

3) What is the direct variation equation if y = 8 and x = 4?

_____

4) What is the direct variation equation if y = –5 and x = 7?

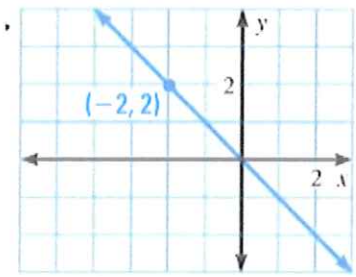
Acc

_____

Acc

For 5–7, the graph of a direct variation is shown. a) Write the direct variation equation for the graph. b) Determine the value of y when x = 8 using your equation.

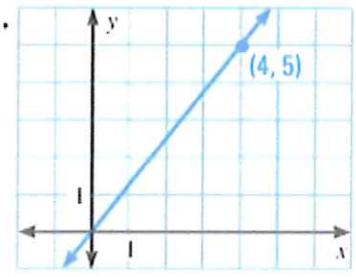
5)



a) _____

b) _____

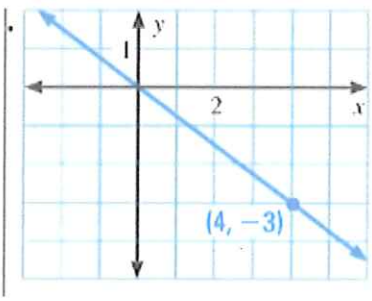
6)



a) _____

b) _____

7)



a) _____

b) _____

8) Suppose y varies directly with x, and when y is 16, x is 8. a) Write the direct variation equation for the data. b) Find y when x is 16.

Acc

a) _____

b) _____

9) Suppose y varies directly with x, and when y is 2, x is 3. a) Write the direct variation equation for the data. b) Find x when y is 42.

Acc

a) _____

b) _____

C

Acc

10) A recipe for 2 dozen corn muffins calls for 3 cups of flour. The number of muffins varies directly with the amount of flour used.

a) Write a direct variation equation for the relationship between the number of cups of flour and muffins. *(Hint, cannot use the number 2 in the equation.)*

_____

b) Use the equation to determine how many cups of flour are needed to make 6 dozen muffins.

_____

B

Acc

11) Your distance from a lightning bolt varies directly with the time it takes you to hear thunder. If you hear thunder 10 seconds after you see the lightning, you are about 2 miles from the lightning.

a) Write a direct variation equation for the relationship between time and distance.

_____

b) How many seconds it will take for the thunder to travel a of 4 miles.

_____

A
B
C
Acc

12) Drew is an artist. He paints portraits. The table below shows the number of portraits painted in hours. Do the numbers in the table represent a proportional relationship?

Number of portraits	Time (In Hours)
5	10
6	15
7	20
8	25

A
B
C
Acc

13) This table shows the amount earned by Harry for selling cups of ice cream. Do the numbers in the table represent a proportional relationship?

Cups sold (km)	Earnings ($)
3	12
4	16
5	20
6	24

B
C
Acc

14) Fred wrote notes during an examination. The table below shows number of pages written in relation to the time it took to make the notes (in hours). Does the table represent a proportional relationship?

Notes (pages)	Time (In Hours)
6.5	9.75
7.5	11.25
8.5	13
9.5	15

A
B
C
Acc

Which of the ordered pairs below show a proportional relationship.

15) (3,12) (4,16) (5,20)

16) (10,5) (12,2) (14,7)

17) (2,10) (3,15) (4,24)

18) (7,21) (8,32) (9,45)