NAME: _____ HW 3.2 – DIRECT VARIATION

DATE: _____ ALGEBRA

1 – 4 Determine which of the following tables of values expresses direct variation. State the constant of variation.

1.

x	2	3	4	5	6
y	4	6	8	10	12

2.

x	2	3	4	5	6
y	6	8	12	16	20

3.

r	0.5	1	1.5	2	2.5
d	2	4	6	8	10

4.

m	0	1	2	3	4
n	2	3	4	5	6

5 – 13 Determine which of the following equations expresses direct variation. State the constant of variation.

5. $y = 3x - 1$

6. $r = 4h$

7. $c = 2\pi r$

8. $y = 3x^2$

9. $\frac{3y}{x} = -9$

10. $\frac{x}{y} = -7$

11. $-2y = 8$

12. $\frac{y}{x} = \frac{3}{7}$

13. $-5y = -20x$

14 – 20 Solve.

14. Two quantities, x and y, vary directly. When $x = 4$, $y = 10$. Find the value of y when $x = 6$.

15. Two quantities, A and h, vary directly. When $A = 18.75$, $h = 7.25$. Find the value of h rounded to the nearest hundredth when $A = 8.75$.

16. If x varies directly with y and $x = 6$ when $y = 10$, what is the value of x when $y = 25$?

17. If x varies directly as y when $x_1 = 13, x_2 = 3$, and $y_1 = 7$, then what is the value of y_2?

18. If 7 cubic centimeters of blood contain 0.8 grams of hemoglobin, how many grams of hemoglobin can we expect to find in 9.8 cubic centimeters of blood?

19. If the ABC Company paid a total dividend of \$44 on 400 shares of its stock, how much of a dividend did it pay on 225 shares of stock?

20. An automatic box machine can fabricate 180 pizza boxes in 3 hours. How many 8-hour days would it take the machine to produce 3000 pizza boxes?