Name:

Algebra

Section 8.9

**Find the constant of variation**

1. y varies directly as x, and y = 9 when x = 54

2. y varies directly as x, and y = 6 when x = 72

3. t varies directly as s, and t = -16 when s = -2

4. h varies directly as m, h = 112 when m = -16

5. w is directly proportional to m, and w = 150 when m = 6

6. p is directly proportional to t, and p = 210 when t = 14

**Solve the problem**

7. y varies directly as x, and y = 450 when x = 6. Find y when x = 10

8. d varies directly as z, and d = 6 when z = 48. Find d when z = 20

9. h is directly proportional to a, and h = 425 when a = 8.5. Find h when a = 12

10. r is directly proportional to a, and r = 14 when a = 87.5. Find r when a = 25

**(x1, y1) and (x2, y2) are ordered pairs of the same direct variation. Find each missing value**

11. x1 = 15, y1= 9, x2 = 40, y2 = ? 12. x1 = 45, y1 = ?, x2 = 60, y2 = 100

13. x1 = 3.6, y1 = 3, x2 = ?, y2 = 1 14. x1 = ?, y1 = 7, x2 = 7.65, y2 = 9

15. x1 = 1/10, y1 = 1/6, x2 = 2/5, y2 = ? 16. x1 = 6/5, y1 = ?, x2 = 2/3, y2 = 1/9