

Direct and Inverse Variation Worksheet

Name: _____

Find the Missing Variable:

- 1) y varies directly with x . If $y = -4$ when $x = 2$, find y when $x = -6$.
- 2) y varies inversely with x . If $y = 40$ when $x = 16$, find x when $y = -5$.
- 3) y varies inversely with x . If $y = 7$ when $x = -4$, find y when $x = 5$.
- 4) y varies directly with x . If $y = 15$ when $x = -18$, find y when $x = 1.6$.
- 5) y varies directly with x . If $y = 75$ when $x = 25$, find x when $y = 25$.

Classify the following as: a) Direct b) Inverse c) Neither

6) $m = -5p$

9) $c = \frac{e}{-4}$

12) $c = 3v$

7) $r = \frac{9}{t}$

10) $n = \frac{1}{2}f$

13) $u = \frac{i}{18}$

8) $d = 4t$

11) $z = \frac{-2}{t}$

What is the constant of variation for the following?

14) $d = 4t$

15) $z = \frac{-2}{t}$

16) $n = \frac{1}{2}f$

17) $r = \frac{9}{t}$

Answer the following questions.

- 18) If x and y vary directly, as x decreases, what happens to the value of y ?
- 19) If x and y vary inversely, as y increases, what happens to the value of x ?
- 20) If x and y vary directly, as y increases, what happens to the value of x ?
- 21) If x and y vary inversely, as x decreases, what happens to the value of y ?