

Algebra 2

7.1 Inverse Variation

Variations

- Direct Variation _____
 - $x \uparrow, y \uparrow$
- Inverse Variation _____
 - $x \uparrow, y \downarrow$
- a is the _____ of variation

What type of variation is each of the following?

$$xy = 48$$

$$2y = x$$

$$y = 2x + 3$$

$$y = \frac{2}{x}$$

Checking data for variation

1. Look at the _____
2. If y _____ as x increases, check _____ variation
3. If y _____ as x increases, check _____ variation
4. Plug each of the _____ in one of the variation equations to find _____
5. If the a stays the _____, the data has that type of variation

What type of variation?

x	2	4	8
y	8	4	2

Solving Variations

1. Write the equation in _____ stated.
2. "Varies" means "_____"
3. Plug in x and y to find _____
4. Plug in _____ and the other _____ and solve

y varies inversely as x . When $x = -3, y = 8$. Write an equation relating x and y . Then find y when $x = 3$.

y varies inversely as x . When $x = 5$, $y = -4$. Write an equation relating x and y . Then find y when $x = 3$.

The time t (in hours) that it takes a group of roofers to roof a house varies inversely with the number n of roofers. It takes a group of 4 roofers 9 hours to roof the house. How long does it take 6 roofers to finish the house?

359 #1-25 odds, 26, 31, 35, 39, 45, 47, 49 = 20