

Algebra II Variation Worksheet

Solve each problem. Show all work.

Given y varies directly as x. Use $y=kx$

1. If $x = 21$ when $y = 7$, find x when $y = 4$.
2. If $x = -27$ when $y = 3$, find x when $y = 18$.
3. If $x = 16$ when $y = -8$, find x when $y = 4$.
4. If $x = 2.6$ when $y = 20.8$, find y when $x = 3.9$.
5. If $x = 3$ when $y = 25$, find y when $x = 4$.
6. If $x = -6$ when $y = .18$, find y when $x = -9$.
7. If $x = -30$ when $y = -6$, find x when $y = 22.2$.
8. A number y varies directly as the square of the number x . If $y = 32$ when $x = 4$, find y when $x = 6$.

Given y varies inversely as x. Use $y=k/x$

9. If $x = 2$ when $y = 27$, find y when $x=9$.
10. If $x = 3$ when $y = 24$, find y when $x=8$.

11. If $x = 2$ when $y = -32$, find x when $y=4$.

14. If $x = 5$ when $y = -2$, find y when $x=2$.

12. If $y = 4$ when $x = 9$, find x when $y=72$.

15. If $x = 4$ when $y = 8$, find y when $x=2$.

13. If $y = -3$ when $x = 25$, find y when $x = 15$.

16. If $x = .5$ when $y = 10$, find y when $x=2$.

17. A number y varies inversely as the square of x . If $y = 2$ when $x = 6$, what is y when $x = 3$?