

Name: _____

Due Date: _____

Teacher: _____

Parent Sign: _____

Introduction to proportional relationships

1. If y is proportional to x and $y = 6$ when $x = 2$, find the constant of proportionality k .
2. If y is proportional to x and $y = 15$ when $x = 3$, find k .
3. If y is proportional to x and $y = 9$ when $x = 4$, find k .
4. If y is proportional to x and $y = 12$ when $x = 3$, find k .
5. If $y = kx$ and $k = 7$, find y when $x = 5$.
6. If $y = kx$ and $k = 0.5$, find y when $x = 8$.
7. If y is proportional to x and $y = 0$ when $x = 10$, find k .
8. In a table x : 1, 2, 3 and y : 2, 4, 6, find k .
9. In a table x : 2, 4, 6 and y : 3, 6, 9, find k .
10. If y is proportional to x and $y = 12$ when $x = 3$, what is k ? (repeat check)
11. Are the ratios $\frac{2}{5}$ and $\frac{4}{10}$ the same? ($\frac{Yes}{No}$)
12. Are the pairs (3,6), (5,10), (7,15) all proportional? ($\frac{Yes}{No}$)

Identifying constant of proportionality graphically

13. A graph shows a line through the origin and the point (4, 12). What is k ?
14. A graph shows a line through the origin and the point (5, 20). What is k ?
15. A graph shows a line through the origin and the point (3, -6). What is k ?
16. A graph shows a line through the origin and the point (8, 2). What is k ?
17. A graph shows a line through the origin and the point (10, 0). What is k ?
18. A graph shows points (0,0) and (2,6) on the line. What is k ?
19. A graph shows points (0,0) and (4,9) on the line. What is k ?
20. A graph shows points (1,2) and (2,4) on the line. Is the relationship proportional? If yes, what is k ?
21. A graph shows points (1,3) and (2,7) on the line. Is the relationship proportional? ($\frac{Yes}{No}$)
22. A graph shows points (0,0) and (5,-15) on the line. What is k ?
23. A graph shows points (2,8) and (4,16) on the line. What is k ?
24. A graph shows points (3,9) and (6,18) on the line. What is k ?
25. A graph shows points (2,5) and (4,10) on the line. Is the relationship proportional? If yes, what is k ?

Constant of proportionality from graph

26. A line through the origin passes through (6, 2). What is k ?
27. A line through the origin passes through (9, 3). What is k ?
28. A line through the origin passes through (7, 14). What is k ?
29. A line through the origin passes through (4, 1). What is k ?

Math Worksheet for 7th Grade

Constant of proportionality

30. A line through the origin passes through (5, 25). What is k?
31. A line through the origin passes through (12, 36). What is k?
32. A line through the origin passes through (8, -4). What is k?
33. A line through the origin passes through (3, 0). What is k?
34. A line through the origin passes through (0,0) and (2,3). What is k?
35. A line through the origin passes through (10,30). What is k?
36. A line through the origin passes through (2,1). What is k?
37. A line through the origin passes through (15,45). What is k?

Identifying the constant of proportionality from equation

38. For $y = 3x$, what is k?
39. For $y = \left(\frac{1}{4}\right)x$, what is k?
40. For $y = 0.5x$, what is k?
41. For $y = -2x$, what is k?
42. For $y = \frac{x}{5}$, what is k?
43. For $y = 7x$, what is k?
44. For $y = 2.5x$, what is k?
45. For $y = 4x + 3$, is the relationship proportional? ($\frac{Yes}{No}$). If no, explain briefly.
46. For $y = -0.75x$, what is k?
47. For $y = x$, what is k?
48. For $y = 0x$, what is k?
49. For $y = \left(\frac{2}{3}\right)x$, what is k?
50. For $3y = 12x$, find k after writing y in the form $y = kx$.