

Practice 5-4

Solving Proportions

Solve each proportion.

1. $\frac{3}{8} = \frac{m}{16}$ $m = 6$ 2. $\frac{9}{4} = \frac{27}{x}$ $x = 12$ 3. $\frac{18}{6} = \frac{j}{1}$ $j = 3$ 4. $\frac{b}{18} = \frac{7}{6}$ $b = 21$
 5. $\frac{12}{q} = \frac{3}{4}$ $q = 16$ 6. $\frac{3}{2} = \frac{15}{r}$ $r = 10$ 7. $\frac{5}{x} = \frac{25}{15}$ $x = 3$ 8. $\frac{80}{20} = \frac{4}{n}$ $n = 1$

Estimate the solution of each proportion.

- ~~9. $\frac{m}{25} = \frac{16}{98}$ 10. $\frac{7}{3} = \frac{52}{n}$ 11. $\frac{30}{5.9} = \frac{k}{10}$ 12. $\frac{2.8}{j} = \frac{1.3}{2.71}$
 13. $\frac{y}{12} = \frac{2.89}{4.23}$ 14. $\frac{5}{8} = \frac{b}{63}$ 15. $\frac{9}{4} = \frac{35}{d}$ 16. $\frac{c}{7} = \frac{28}{50}$~~

Solve each proportion.

17. $\frac{4}{5} = \frac{b}{40}$ $b = 32$ 18. $\frac{11}{7} = \frac{88}{c}$ $c = 56$ 19. $\frac{x}{1.4} = \frac{28}{5.6}$ $x = 7$ 20. $\frac{0.99}{a} = \frac{9}{11}$ $a = 1.21$
 21. $\frac{42.5}{20} = \frac{x}{8}$ $x = 17$ 22. $\frac{15}{25} = \frac{7.5}{y}$ $y = 12.5$ 23. $\frac{16}{b} = \frac{56}{38.5}$ $b = 11$ 24. $\frac{z}{54} = \frac{5}{12}$ $z = 22.5$
 25. $\frac{8}{12} = \frac{e}{3}$ $e = 2$ 26. $\frac{v}{35} = \frac{15}{14}$ $v = 37.5$ 27. $\frac{60}{n} = \frac{12}{5}$ $n = 25$ 28. $\frac{6}{16} = \frac{9}{w}$ $w = 24$
 29. $\frac{4}{7} = \frac{r}{35}$ $r = 20$ 30. $\frac{18}{16} = \frac{27}{t}$ $t = 24$ 31. $\frac{n}{12} = \frac{12.5}{15}$ $n = 10$ 32. $\frac{27}{f} = \frac{40.5}{31.5}$ $f = 21$
 33. 5 is to 8 as 15 is to w $w = 24$ 34. y is to 8 as 22.5 is to 10 $y = 18$ 35. 14 is to b as 28 is to 18 $b = 9$
 36. 10 is to 7 as m is to 10.5 $m = 15$ 37. 30 is to 16 as j is to 8 $j = 15$ 38. r is to 17 as 81 is to 51 $r = 27$

Write a proportion for each situation. Then solve.

39. Jaime paid \$1.29 for three ponytail holders. At that rate, what would eight ponytail holders cost her? $\frac{3}{1.29} = \frac{8}{x}$ $x = \$3.44$ 40. According to a label, there are 25 calories per serving of turkey lunch meat. How many calories are there in 2.5 servings? $\frac{x}{2.5} = \frac{25}{1}$ $x = 62.5 \text{ cal.}$
 41. Arturo paid \$8 in tax on a purchase of \$200. At that rate, what would the tax be on a purchase of \$150? $\frac{x}{150} = \frac{8}{200}$ $x = \$6$ 42. Chris drove 200 mi in 4 h. At that rate, how long would it take Chris to drive 340 mi? $\frac{x}{340} = \frac{4}{200}$ $x = 6.8 \text{ hrs or } 6 \text{ hrs } 48 \text{ min}$