



ACT COMPASS Preparation Worksheet

Pre-algebra: Ratios and Proportions

State if each pair of ratios forms a proportion.

1. $\frac{4}{2}$ and $\frac{20}{6}$

4. $\frac{3}{2}$ and $\frac{18}{8}$

2. $\frac{4}{3}$ and $\frac{16}{12}$

5. $\frac{4}{3}$ and $\frac{8}{6}$

3. $\frac{12}{24}$ and $\frac{3}{4}$

6. $\frac{6}{9}$ and $\frac{2}{3}$

Solve each proportion.

7. $\frac{10}{k} = \frac{8}{4}$

15. $\frac{p}{8} = \frac{13}{2}$

8. $\frac{m}{10} = \frac{10}{3}$

16. $\frac{3}{13} = \frac{v}{3}$

9. $\frac{2}{x} = \frac{7}{9}$

17. $\frac{10}{12} = \frac{2}{n}$

10. $\frac{3}{x} = \frac{7}{10}$

18. $\frac{11}{10} = \frac{r}{11}$

11. $\frac{4}{9} = \frac{2}{x}$

19. $\frac{x}{9} = \frac{7}{14}$

12. $\frac{6}{a} = \frac{3}{8}$

20. $\frac{a}{10} = \frac{11}{14}$

13. $\frac{8n}{8} = \frac{8}{3}$

21. $\frac{v}{12} = \frac{10}{2}$

14. $\frac{7}{9} = \frac{a}{5}$

22. $\frac{6}{14} = \frac{5}{n}$

Answer each question and round your answer to the nearest whole number.

23. If you can buy one can of pineapple chunks for \$2, then how many can you buy with \$10?

24. One jar of crushed ginger costs \$2. How many jars can you buy for \$4?

25. One cantaloupe costs \$2. How many cantaloupes can you buy for \$6?

26. One package of blueberries costs \$3. How many packages of blueberries can you buy for \$9?



27. *Shawna reduced the size of a rectangle to a height of 2 in. What is the new width if it was originally 24 in. wide and 12 in. tall?*
28. *Ming was planning a trip to Western Samoa. Before going, she did some research and learned that the exchange rate is 6 Tala for \$2. How many Tala would she get if she exchanged \$6?*
29. *Jasmine bought 32 kiwi fruit for \$16. How many kiwi can Lisa buy if she has \$4?*
30. *If you can buy four bulbs of elephant garlic for \$8, then how many can you buy with \$32?*
31. *One bunch of seedless black grapes costs \$2. How many bunches can you buy for \$20?*
32. *The money used in Jordan is called Dinar. The exchange rate is \$3 to 2 Dinars. Find out how many dollars you would receive if you exchanged 22 Dinars.*
33. *Gabriella bought three cantaloupes for \$7. How many cantaloupes can Shayna buy if she has \$21?*
34. *Jenny was planning a trip to the United Arab Emirates. Before going, she did some research and learned that the exchange rate is 4 Dirhams for every \$1. How many Dirhams would she get if she exchanged \$5?*
35. *Castel bought four bunches of fennel for \$9. How many bunches of fennel can Mofor buy if he has \$18?*
36. *If you can buy one fruit basket for \$30, then how many can you buy with \$60?*
37. *Asanji took a trip to Mexico. Upon leaving he decided to convert all his Pesos back into dollars. How many dollars did he receive if he exchanged 42.7 Pesos at a rate of $\$5.30 = 11.1$ Pesos?*
38. *The currency in Argentina is the Peso. The exchange rate is approximately $\$3 = 1$ Peso. At this rate, how many Pesos would you get if you exchanged \$121.10?*
39. *Mary reduced the size of a painting to a width of 3.3 in. What is the new height if it was originally 32.5 in. tall and 42.9 in. wide?*
40. *Molly bought two heads of cabbage for \$1.80. How many heads of cabbage can Willie buy if he has \$28.80?*