



ACT COMPASS Preparation Worksheet

Pre-algebra: Ratios and Proportions

State if each pair of ratios forms a proportion.

1. $\frac{4}{2}$ and $\frac{20}{6}$ **No**

4. $\frac{3}{2}$ and $\frac{18}{8}$ **No**

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

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

3. $\frac{12}{24}$ and $\frac{3}{4}$ **No**

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

Solve each proportion.

7. $\frac{10}{k} = \frac{8}{4}$ {5}

15. $\frac{p}{8} = \frac{13}{2}$ {52}

8. $\frac{m}{10} = \frac{10}{3}$ {33.33}

16. $\frac{3}{13} = \frac{v}{3}$ {0.69}

9. $\frac{2}{x} = \frac{7}{9}$ {2.57}

17. $\frac{10}{12} = \frac{2}{n}$ {2.4}

10. $\frac{3}{x} = \frac{7}{10}$ {4.28}

18. $\frac{11}{10} = \frac{r}{11}$ {12.1}

11. $\frac{4}{9} = \frac{2}{x}$ {4.5}

19. $\frac{x}{9} = \frac{7}{14}$ {4.5}

12. $\frac{6}{a} = \frac{3}{8}$ {16}

20. $\frac{a}{10} = \frac{11}{14}$ {7.85}

13. $\frac{8n}{8} = \frac{8}{3}$ {2.66}

21. $\frac{v}{12} = \frac{10}{2}$ {60}

14. $\frac{7}{9} = \frac{a}{5}$ {3.88}

22. $\frac{6}{14} = \frac{5}{n}$ {11.66}

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? **5**

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

25. One cantaloupe costs \$2. How many cantaloupes can you buy for \$6? **3**

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



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?* **4 in.**
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?* **18 Tala**
29. *Jasmine bought 32 kiwi fruit for \$16. How many kiwi can Lisa buy if she has \$4?* **8**
30. *If you can buy four bulbs of elephant garlic for \$8, then how many can you buy with \$32?* **16**
31. *One bunch of seedless black grapes costs \$2. How many bunches can you buy for \$20?* **10**
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**
33. *Gabriella bought three cantaloupes for \$7. How many cantaloupes can Shayna buy if she has \$21?* **9**
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?* **20 Dirhams**
35. *Castel bought four bunches of fennel for \$9. How many bunches of fennel can Mofor buy if he has \$18?* **8**
36. *If you can buy one fruit basket for \$30, then how many can you buy with \$60?* **2**
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?* **\$20.39**
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?* **40.4 Pesos**
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?* **2.5 in.**
40. *Molly bought two heads of cabbage for \$1.80. How many heads of cabbage can Willie buy if he has \$28.80?* **32**