

Unit 1 – Ratios and Proportional Relationships

Review Guide

Math 8

Identify what is asked.

- _____ 1. The comparison or relationship between two things.
- _____ 2. The name for the values in a ratio.
- _____ 3. A special ratio that compares quantities of different units.
- _____ 4. A rate where the second term is equal to 1.
- _____ 5. Ratios that have equal simplest form.
- _____ 6. The value of x that will make the ratios 3:4 and x :8 equivalent.
- _____ 7. The equality of two ratios or fractions.
- _____ 8. It is a number expressed as a fraction of 100.

Write the ratio of the given objects.

9.  The ratio of  to  is _____.

10.  The ratio of  to  is _____.

11.  The ratio of  to the total number of hearts is _____.

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Find the unknown term in the given equivalent ratios.

12. $21:24 = 28:x$

13. $25:75 = x:3$

14. $x:48 = 10:40$

Use the symbols ($<$, $>$, $=$) to compare the given pairs of ratios.

15. $36:12$ _____ $12:4$

16. $7:8$ _____ $11:13$

17. $14:63$ _____ $4:18$

18. $13:24$ _____ $18:6$

19. $16:6$ _____ $14:4$

Tell whether the given proportions are TRUE or FALSE.

_____ 20. $3:25 = 75:100$

_____ 21. $12:16 = 24:48$

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_____ 22. $11:44 = 8:32$

Complete the table with the correct values.

| | Fractions | Percent | Decimal |
|-----|---------------|---------|---------|
| 23. | | 36% | |
| 24. | | | 0.45 |
| 25. | | 23% | |
| 26. | | | 0.68 |
| 27. | $\frac{3}{4}$ | | |
| 28. | | | 0.32 |
| 29. | $\frac{4}{5}$ | | |
| 30. | | 71% | |

Convert the following units using **RATIO**.

31. 0.05 kilometers = _____ meter/s

32. 1000 pounds = _____ ton/s

33. 375 milliliters = _____ liter/s

34. 7.2 inches = _____ feet

35. 0.08 kilograms = _____ milligram/s

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Solve the following problems.

36. To make lemonade, 5 liters of water for every 8 lemons are needed. To make more lemonade, one needs 5 times the quantity. What is the ratio of water to lemonade of the new mixture?

37. If Tony can type 180 words in 3 minutes and Phil can type 210 words in 5 minutes, who types faster?

38. James went on a vacation and had spent $\frac{5}{7}$ of her money.

- What percent of his money did she already spend?
- What percent of his money does she have left?
- Express the money he his left in fraction.

39. Chris has a piece of wood 1.2 meters long. If he cuts it into 3 equal equal parts, how long will each piece be in millimeters?