Year 8 Maths Worksheet: Ratios

Name: _____   Date: _____

Section A: Writing Ratios (Easy Warm-up)

Write each ratio in simplest form.

1. 6 : 12 = _____
2. 10 : 15 = _____
3. 8 : 20 = _____
4. 14 : 21 = _____
5. 9 : 27 = _____
6. 16 : 24 = _____

Section B: Writing Ratios from Situations

Write the ratio in simplest form.

7. There are 8 boys and 12 girls in a class.
   Boys : Girls = _____
8. A fruit basket has 5 apples and 15 oranges.
   Oranges : Apples = _____
9. A bag contains 6 red marbles and 9 blue marbles.
   Red : Blue = _____
10. A recipe uses 2 cups of sugar and 6 cups of flour.
    Flour : Sugar = _____

Section C: Comparing Ratios (Same or Different?)

Simplify both ratios, then state if they are **equal or not equal**.

11. 2 : 4 and 3 : 6 → _____
12. 5 : 10 and 2 : 5 → _____
13. 6 : 9 and 4 : 6 → _____
14. 8 : 12 and 10 : 15 → _____
15. 3 : 5 and 6 : 10 → _____

Section D: Which Ratio is Bigger?

Compare the ratios.

16. 2 : 3 or 3 : 4 → _____ is larger
17. 4 : 5 or 5 : 6 → _____ is larger
18. 3 : 8 or 4 : 9 → _____ is larger
19. 5 : 7 or 6 : 8 → _____ is larger

Section E: Dividing Quantities in a Ratio (Basic)

20. Divide 20 in the ratio 1 : 1
    Answer: _____ and _____
21. Divide 30 in the ratio 2 : 1
    Answer: _____ and _____
22. Divide 40 in the ratio 3 : 1
    Answer: _____ and _____
23. Divide 50 in the ratio 2 : 3
    Answer: _____ and _____
24. Divide 36 in the ratio 4 : 5
    Answer: _____ and _____

Section F: Dividing Quantities (Intermediate)

25. Divide $60 in the ratio 2 : 4

    parts
    1 part = ⬜ ÷

    $$\frac{\Box}{6} = \$20 \qquad \frac{\Box}{6} = \$40 \qquad \frac{\quad}{6} = \$10$$

26. Divide 72 apples in the ratio 5 : 7

    parts
    1 part = ⬜ ÷

    $$\frac{\Box}{\Box} = \text{apples} \qquad \frac{\Box}{\Box} = \text{apples}$$

    $$\frac{\quad}{\quad} =$$

27. Divide 90 in the ratio 3 : 2

$\frac{\square}{\square}$ = $\frac{\square}{\square}$ =

parts

1 part =   ÷

— =

28. Divide 84 in the ratio 3 : 4

$\frac{\square}{\square}$ = $\frac{\square}{\square}$ =

parts

1 part =   ÷

— =

Section G: Problem Solving (Real-life Context)

29. A class has boys and girls in the ratio 3 : 2.
    If there are 25 students in total, how many boys and girls are there?

30. A recipe uses flour and sugar in the ratio 4 : 1.
    If 20 cups are used in total, how much flour and sugar are needed?

31. Two friends share $45 in the ratio 2 : 3.
    How much does each person get?

32. A school has red and blue houses in the ratio 5 : 7.
    If there are 120 students, how many are in each house?

33. A drink is made by mixing water and juice in the ratio 3 : 1.
    If you make 40 mL of drink, how much water and juice is used?

Section H: Challenge Questions

34. The ratio of cats to dogs is 2 : 3.
    There are 10 more dogs than cats.
    How many cats and dogs are there?

35. A sum of money is shared between A, B, and C in the ratio 2 : 3 : 5.
    If the total is $100, how much does each person receive?

36. The ratio of boys to girls is 4 : 5.
    After 6 boys leave, the ratio becomes 2 : 3.
    How many boys and girls were there originally?

Extension (Fast Finishers)

37. Create your own ratio problem involving sharing money. Solve it