Ratios with tape diagrams (part-to-part)

1. A tape diagram has two parts labeled 3 and 6. Write the ratio of the first part to the second part in simplest form.

2. A tape diagram is divided into three equal parts labeled 4, 4, and 4. What is the ratio of the first part to the third part (simplest form)?

3. A tape diagram has two parts labeled 7 and 2. Write the ratio of the second part to the first part (simplest form).

4. A tape diagram is divided into five equal parts. Each part represents 2 units. What is the ratio of one part to the rest of the diagram (simplest form)?

5. A tape diagram has three parts labeled 3, 6, and 9. Write the ratio of the first part to the third part (simplest form).

6. A tape diagram has two parts labeled 10 and 15. Write the ratio of the second part to the first part (simplest form).

7. A tape diagram has three parts labeled 8, 4, and 8. What is the ratio of the first and third parts combined to the second part (simplest form)?

8. A tape diagram has four parts labeled 3, 3, 3, and 6. Write the ratio of the last part to the first part (simplest form).

9. A tape diagram has two parts labeled 12 and 4. What is the ratio of the first part to the second part (simplest form)?

10. A tape diagram has three parts labeled 2, 5, and 3. What is the ratio of the middle part to the sum of the other two parts (simplest form)?

Ratios with tape diagrams (part:whole)

11. A tape diagram is divided into 4 equal parts; each part is 3. What is the ratio of one part to the whole (simplest form)?

12. A tape diagram has three parts labeled 2, 3, and 5. What is the ratio of the first part to the whole diagram (simplest form)?

13. A tape diagram has 6 equal parts, each 1 unit. What is the ratio of 2 parts to the whole (simplest form)?

14. A tape diagram has two equal parts labeled 7 and 7. What is the ratio of one part to the whole (simplest form)?

15. A tape diagram has three equal parts, each 4. What is the ratio of two parts to the whole (simplest form)?

16. A tape diagram has two parts labeled 3 and 5. What is the ratio of the second part to the whole (simplest form)?

17. A tape diagram has four parts labeled 2, 2, 2, and 4. What is the ratio of the last part to the whole (simplest form)?

18. A tape diagram has three parts labeled 6, 2, and 2. What is the ratio of the first part to the whole (simplest form)?

19. A tape diagram has five equal parts, each 3. What is the ratio of three parts to the whole (simplest form)?

20. A tape diagram has two parts labeled 9 and 3. What is the ratio of the smaller part to the whole (simplest form)?

Equivalent ratio word problems

21. If the ratio of apples to bananas is 2:3, how many apples correspond to 9 bananas?

22. A map scale shows 1 cm : 5 km. How many kilometers does 3 cm represent?

23. A recipe uses 2 cups of flour for every 3 cups of sugar. How many cups of flour are needed for 6 cups of sugar?

24. A car travels 30 miles in 2 hours at a steady speed. How far does it travel in 5 hours at the same speed?

25. If 4 pencils cost $2, how much do 10 pencils cost?

26. The ratio of marbles to stickers is 3:8. How many stickers correspond to 6 marbles?

27. A machine packs 5 boxes in 4 minutes. How many boxes will it pack in 12 minutes at the same rate?

28. The ratio of cats to dogs at a shelter is 1:2. If there are 6 dogs, how many cats are there?

29. Paint mix calls for 2 parts blue to 5 parts white. How many parts blue are needed for 10 parts white?

30. If 7 notebooks are shared by 3 students evenly in ratio 7:3, how many notebooks are needed for 9 students at the same rate?

Simplify a ratio from a tape diagram

31. A tape diagram has two parts labeled 6 and 9. Simplify the ratio of the first part to the second part.

32. Two parts on a tape diagram are 12 and 8. Simplify the ratio 12:8.

33. A tape diagram has parts 4, 6, and 8. Simplify the ratio of the second part to the third part.

34. A tape diagram has two parts labeled 15 and 5. Simplify the ratio of the first to the second.

35. A tape diagram has two parts labeled 14 and 21. Simplify the ratio 14:21.

36. A tape diagram has parts 18 and 12. Simplify the ratio 18:12.

37. A tape diagram has parts 25 and 10. Simplify the ratio 25:10.

38. A tape diagram has parts 9, 9, and 6. Simplify the ratio of the first plus second parts to the third part.

39. A tape diagram has two parts labeled 16 and 4. Simplify the ratio 16:4.

40. A tape diagram has two parts labeled 27 and 9. Simplify the ratio 27:9.

Ratios and double number lines

41. On a double number line, the top 2 matches the bottom 6. What bottom value matches top 8?

42. On a double number line, the top 3 matches the bottom 12. What bottom value matches top 9?

43. On a double number line, the top 5 matches the bottom 20. What bottom value matches top 15?

44. On a double number line, the top 4 matches the bottom 6. What top value matches bottom 18?

45. On a double number line, the top 2 matches the bottom 3. What top value matches bottom 18?

46. On a double number line, the top 3 matches the bottom 5. What bottom value matches top 12?

47. On a double number line, the top 8 matches the bottom 4. What bottom value matches top 2?

48. On a double number line, the top 9 matches the bottom 6. What top value matches bottom 2?

49. On a double number line, the top 1 matches the bottom 4. What bottom value matches top 7?

50. On a double number line, the top 6 matches the bottom 9. What top value matches bottom 3?