

Operations with Fractions

Score _____ Per _____

1. Diego does not know why you need to find a common denominator when adding fractions. Explain to Diego **why** you need to find a common denominator when adding fractions: _____
- _____
- _____

2. Millie planted a garden. *Half* of the garden was tomatoes, *one third* was beans, and *the rest* was lettuce. What fraction of the garden was tomatoes *and* beans?

What fraction of the garden was lettuce?

3. **True** or **False**: Multiplying always makes numbers bigger.

4. **True** or **False**: Dividing always makes numbers smaller.

5. a) $10 \div \frac{1}{2} =$

6. a) $10 \times \frac{1}{2} =$

b) $5 \div \frac{1}{2} =$

b) $5 \times \frac{1}{2} =$

c) $8 \div \frac{1}{2} =$

c) $8 \times \frac{1}{2} =$

d) Does dividing by $\frac{1}{2}$ make a number smaller or bigger? _____

d) Does multiplying by $\frac{1}{2}$ make a number smaller or bigger?

7. If $\frac{5}{6}$ is divided by a certain fraction $\frac{a}{b}$, the result is $\frac{1}{4}$. What is the fraction $\frac{a}{b}$? _____

Describe in words the **first step** in computing the following.

8. $\frac{4}{5} + \frac{2}{3}$ _____

9. $\frac{3}{4} \times \frac{5}{3}$ _____

10. $\frac{1}{2} - \frac{5}{6}$ _____

$$11. 2\frac{5}{6} \div \frac{3}{4}$$

Compute the following *without using a calculator*. Show ALL your work. Simplify your answers.

$$12. \frac{1}{3} + \frac{3}{8}$$

$$13. -\frac{5}{9} - \frac{1}{9}$$

$$14. \frac{9}{5} + \left(-\frac{4}{3}\right)$$

$$15. -1 + \frac{4}{5}$$

$$16. 1\frac{2}{7} + 3\frac{4}{7}$$

$$17. 2\frac{1}{6} + 6\frac{1}{2}$$

$$18. \frac{8}{2} \times \frac{2}{7}$$

$$19. 6 \times \frac{3}{2}$$

$$20. 2\frac{3}{4} \cdot -\frac{1}{3}$$

$$21. \left(-\frac{5}{3}\right) \left(\frac{7}{6}\right)$$

$$22. -5 \cdot -\frac{4}{5}$$

$$23. 5\frac{1}{4} \times -\frac{1}{4}$$

$$24. \frac{2}{3} \div \frac{5}{4}$$

$$25. \frac{-1}{8} \div \frac{-2}{3}$$

$$26. \frac{5}{7} \div \frac{12}{7}$$

$$27. 4\frac{1}{6} \div \frac{3}{2}$$

$$28. \frac{1}{5} \div -2\frac{1}{2}$$

$$29. \frac{3}{7} \div 5$$