

Mr. Richardson's Fractions Practice #1

Reducing, Multiplying, and Dividing:

The GCD (Greatest Common Divisor) is the key concept behind simplifying, multiplying, and dividing fractions. Additionally, factoring and canceling is a necessary skill for performing the calculations below. Remember, no common denominator (LCM) is needed to multiply or divide fractions. Always simplify (reduce) your answers if needed. You may leave your answers in improper form.

Simplify (Reduce).

1) $\frac{21}{77} = ?$

2) $\frac{38}{95} = ?$

3) $\frac{16}{256} = ?$

4) $\frac{45}{18} = ?$

5) $\frac{8}{72} = ?$

6) $5\frac{20}{95} = ?$

7) $2\frac{63}{140} = ?$

Multiply or divide as indicated below.

8) $\frac{5}{7}\left(\frac{9}{25}\right) = ?$

9) $\frac{7}{12}\left(\frac{4}{3}\right) = ?$

10) $\frac{5}{7}\left(\frac{4}{3}\right)\left(\frac{7}{11}\right) = ?$

11) $\frac{8}{9} \div \frac{2}{3} = ?$

12) $\frac{12}{17} \div \frac{5}{4} = ?$

13) $\frac{6}{11} \div \frac{6}{7} \div \frac{1}{2} = ?$

14) $\frac{8}{9}\left(\frac{3}{4}\right) \div \frac{2}{5} = ?$

Answers:

1) $\frac{3}{11}$ 2) $\frac{2}{5}$ 3) $\frac{1}{16}$ 4) $\frac{5}{2}$ 5) $\frac{1}{9}$ 6) $5\frac{4}{19}$ 7) $2\frac{9}{20}$

8) $\frac{9}{35}$ 9) $\frac{7}{9}$ 10) $\frac{20}{33}$ 11) $\frac{4}{3}$ 12) $\frac{48}{85}$ 13) $\frac{14}{11}$ 14) $\frac{5}{3}$

Adding and Subtracting Fractions:

The Addition and Subtraction of fractions requires a common denominator (LCM of the denominators). It should be your goal to use the least common denominator in all your calculations. Additionally, writing equivalent fraction is a necessary skill for these calculations.

Find Equivalent Fractions to those in #15 through #21. Use sixty as the denominator.

$$\text{Ex: } \frac{2}{3} = \frac{2}{3} \left(\frac{20}{20} \right) = \frac{40}{60}$$

$$15) \frac{5}{12} = ?$$

$$16) \frac{3}{2} = ?$$

$$17) \frac{3}{5} = ?$$

$$18) \frac{4}{15} = ?$$

$$19) \frac{7}{3} = ?$$

$$20) \frac{1}{4} = ?$$

$$21) 3 = ?$$

Add or subtract the fractions below. You will need to use the least common denominator, aka the LCM.

$$22) \frac{5}{12} + \frac{11}{12} = ?$$

$$23) \frac{1}{9} - \frac{1}{18} = ?$$

$$24) \frac{5}{12} - \frac{1}{4} = ?$$

$$25) \frac{9}{20} - \frac{2}{5} = ?$$

$$26) \frac{3}{7} + \frac{3}{5} = ?$$

$$27) \frac{9}{14} - \frac{3}{42} = ?$$

$$28) \frac{5}{7} - \frac{1}{2} + \frac{3}{5} = ?$$

Answers:

$$15) \frac{25}{60} \quad 16) \frac{90}{60} \quad 17) \frac{36}{60} \quad 18) \frac{16}{60} \quad 19) \frac{140}{60} \quad 20) \frac{15}{60} \quad 21) \frac{180}{60}$$

$$22) \frac{4}{3} \quad 23) \frac{1}{18} \quad 24) \frac{1}{6} \quad 25) \frac{1}{20} \quad 26) \frac{36}{35} \quad 27) \frac{4}{7} \quad 28) \frac{57}{70}$$