

Check Your Answers on Fraction Word Problems!

1. $\frac{2}{5}$ of her allowance $(\frac{4}{10} \div \frac{2}{2} = \frac{2}{5})$ A fraction compares the part (\$4) to the whole (\$10). Always remember to simplify by eliminating common factors between the numerator and denominator.
2. $\frac{5}{6}$ bucket of water $(\frac{1}{2} + \frac{1}{3} = \frac{1}{2} \cdot \frac{3}{3} + \frac{1}{3} \cdot \frac{2}{2} = \frac{3}{6} + \frac{2}{6} = \frac{5}{6})$ Addition requires “like terms” or common denominators. Produce a common denominator by multiplying by a form of 1 (which does not change the value).
3. $\frac{3}{8}$ cup of cocoa $(\frac{1}{2}$ of $\frac{3}{4} = \frac{1}{2} \cdot \frac{3}{4} = \frac{3}{8})$ Dividing by 2 (cutting the recipe in half) is the same as multiplying by one-half. Note that “of” typically indicates multiplication.
4. $\frac{1}{12}$ of the distance $(\frac{3}{4} - \frac{2}{3} = \frac{3}{4} \cdot \frac{3}{3} - \frac{2}{3} \cdot \frac{4}{4} = \frac{9}{12} - \frac{8}{12} = \frac{1}{12})$ Subtraction also requires “like terms” or common denominators. Produce a common denominator by multiplying by a form of 1 (which does not change the value).
5. 6 kites $(4\frac{1}{2} \div \frac{3}{4} = \frac{9}{2} \div \frac{3}{4} = \frac{9}{2} \cdot \frac{4}{3} = \frac{\cancel{9}^3}{\cancel{2}_1} \cdot \frac{\cancel{4}^2}{\cancel{3}_1} = 6)$ Division is often redefined as “multiplying by the reciprocal.” The reciprocal flips the fraction (interchange numerator and denominator). To divide fractions, change the operation to multiplication and “flip” the divisor (the second term).
6. $\frac{4}{5}$ of the class $(\frac{1}{10} + \frac{1}{5} + \frac{2}{5} + \frac{1}{10} = \frac{1}{10} + \frac{1}{5} \cdot \frac{2}{2} + \frac{2}{5} \cdot \frac{2}{2} + \frac{1}{10} = \frac{1}{10} + \frac{2}{10} + \frac{4}{10} + \frac{1}{10} = \frac{1+2+4+1}{10} = \frac{8}{10} \div \frac{2}{2} = \frac{4}{5})$
7. $\frac{2}{15}$ $(\frac{1}{3} - \frac{1}{5} = \frac{1}{3} \cdot \frac{5}{5} - \frac{1}{5} \cdot \frac{3}{3} = \frac{5}{15} - \frac{3}{15} = \frac{2}{15})$
8. $\frac{1}{2}$ $(\frac{2}{3}$ of $\frac{3}{4} = \frac{2}{3} \cdot \frac{3}{4} = \frac{\cancel{2}^1}{\cancel{3}_1} \cdot \frac{\cancel{3}^1}{\cancel{4}_2} = \frac{1}{2})$ “Two-thirds of the seats sold” were filled with children under 12. If one-fourth of the seats in the theater were empty, then three-fourths of the seats were sold.
9. $1\frac{1}{4}$ [Number of cups of trail mix \div (Reese + 3 friends) = 5 cups \div 4 people = $\frac{5}{4}$ or $1\frac{1}{4}$ cups of trail mix each]
 $(\text{Number of cups of trail mix} = 2\frac{1}{2} + 1\frac{3}{4} + \frac{1}{2}(1\frac{1}{2}) = \frac{5}{2} + \frac{7}{4} + \frac{1}{2} \cdot \frac{3}{2} = \frac{5}{2} \cdot \frac{2}{2} + \frac{7}{4} + \frac{3}{4} = \frac{10}{4} + \frac{7}{4} + \frac{3}{4} = \frac{20}{4} = 5)$
10. $9\frac{3}{8}$ days $[12\frac{1}{2} \div (2 \text{ pets} \cdot \frac{1}{3} \text{ cup of food} \cdot 2 \text{ times per day}) = \frac{25}{2} \div (\frac{2}{1} \cdot \frac{1}{3} \cdot \frac{2}{1}) = \frac{25}{2} \div \frac{4}{3} = \frac{25}{2} \cdot \frac{3}{4} = \frac{75}{8} = 9\frac{3}{8} \text{ days}]$

Perfect score? Yes! You’ve got this!! Fractions are no problem for you!!!