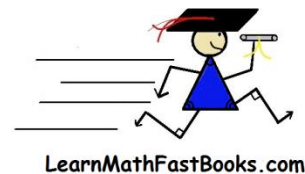


FRACTION BLASTER



ADDING FRACTIONS

1. Get a common denominator.
2. If you changed a denominator, be sure to do the same math to the numerator.
3. Add the numerators.
4. The denominator doesn't change. Reduce if possible.

$$\frac{2}{5} + \frac{1}{4} = \frac{8}{20} + \frac{5}{20} = \frac{13}{20}$$

SUBTRACTING FRACTIONS

1. Get a common denominator.
2. If you changed a denominator, be sure to do the same math to the numerator.
3. Subtract the numerators.
4. The denominator doesn't change. Reduce if possible.

$$\frac{1}{2} - \frac{1}{8} = \frac{4}{8} - \frac{1}{8} = \frac{3}{8}$$

MULTIPLYING FRACTIONS

1. Multiply the numerators.
2. Multiply the denominators.
3. Reduce if possible.

$$\frac{2}{3} \times \frac{5}{12} = \frac{10}{36} \quad \text{Reduces to} \quad \frac{5}{18}$$

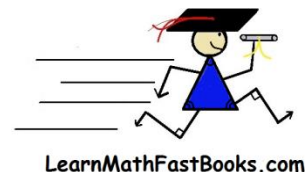
*When multiplying fractions, you can cross cancel to make the numbers smaller, but ONLY when multiplying!

DIVIDING FRACTIONS

1. Flip the second fraction (get the reciprocal) and change the division sign into a multiplication sign.
2. Now follow the steps for multiplying fractions.

$$\frac{7}{15} \div \frac{3}{5} = \frac{7}{15} \times \frac{5}{3} = \frac{7}{\cancel{15}_3} \times \frac{\cancel{5}^1}{3} = \frac{7}{9}$$

MIXED NUMBERS



ADDING MIXED NUMBERS

1. Get a common denominator.
2. Add the whole numbers together.
3. Add the numerators.
4. The denominator doesn't change. Reduce if possible.

$$2\frac{3}{8} + 1\frac{5}{24} = 2\frac{9}{24} + 1\frac{5}{24} = 3\frac{14}{24} = 3\frac{7}{12}$$

SUBTRACTING MIXED NUMBERS

1. Turn the mixed numbers into improper fractions (see below).
2. Get a common denominator.
3. Subtract the numerators.
4. Convert the improper fraction back into a mixed number. Reduce if possible.

$$4\frac{1}{4} - 2\frac{5}{8} = \frac{17}{4} - \frac{21}{8} = \frac{34}{8} - \frac{21}{8} = \frac{13}{8} = 1\frac{5}{8}$$

MULTIPLYING MIXED NUMBERS

1. Turn the mixed numbers into improper fractions (see below).
2. Cross cancel, if possible.
3. Multiply the numerators together and then the denominators.
4. Convert back to a mixed number. Reduce if possible.

$$3\frac{3}{16} \times 5\frac{5}{13} = \frac{51}{16} \times \frac{70}{13} = \frac{51}{\cancel{16}^8} \times \frac{\overset{35}{\cancel{70}}}{13} = \frac{1785}{104} = 17\frac{17}{104}$$

DIVIDING MIXED NUMBERS

1. Turn the mixed numbers into improper fractions (see below).
2. Flip the second fraction (get the reciprocal) and change the sign to multiplication.
3. Now follow the steps 2 through 4 for multiplying fractions.

$$5\frac{3}{11} \div 2\frac{1}{5} = \frac{58}{11} \div \frac{11}{5} = \frac{58}{11} \times \frac{5}{11} = \frac{290}{121} = 2\frac{48}{121}$$

CONVERTING MIXED NUMBERS INTO IMPROPER FRACTIONS

To convert mixed numbers into improper fractions, multiply the whole number by the denominator and then add the numerator to your answer. Put that number over the original denominator.

$$5\frac{4}{7} = 5 \times 7 = 35 \quad 35 + 4 = 39 = \frac{39}{7}$$