Multiplication of Rational Numbers

1. Convert mixed numbers to improper fractions
2. Multiply numerators together and then denominators together. (Remember, the denominator of any whole number is one.)
3. Reduce to lowest terms.

$$\frac{2}{3} \times \frac{6}{11} = \frac{12}{33} = \frac{4}{11}$$

Division of Rational Numbers

1. Convert mixed numbers to improper fractions
2. Take reciprocal (multiplicative inverse) of divisor and change the sign to multiplication.
3. Follow the rules for multiplication.

$$20 \ / \ \frac{4}{5}$$

$$= \frac{20}{1} \times \frac{5}{4}$$

$$= \frac{100}{4}$$

$$= 25$$

$$\frac{2}{3} \ / \ \frac{4}{3}$$

$$= \frac{2}{3} \times \frac{3}{4}$$

$$= \frac{6}{12}$$

$$= \frac{1}{2}$$