

Solve Fractional Coefficients

$$\frac{2}{3}x = 12$$

1. Use parentheses to multiply both sides by the reciprocal of the coefficient.

$$\left(\frac{3}{2}\right)\frac{2}{3}x = 12\left(\frac{3}{2}\right)$$

2. Add a denominator of one to integers.

$$\left(\frac{3}{2}\right)\frac{2}{3}x = \frac{12}{1}\left(\frac{3}{2}\right)$$

3. Slash out common numerators and denominators.

$$\cancel{\left(\frac{3}{2}\right)}\cancel{\frac{2}{3}}x = \frac{12}{1}\left(\frac{3}{2}\right)$$

4. Bring down the variable and equal sign.

$$\cancel{\left(\frac{3}{2}\right)}\cancel{\frac{2}{3}}x = \frac{12}{1}\left(\frac{3}{2}\right)$$
$$x =$$

5. Simplify the fractions and multiply ($6 \times 3 = 18$).

$$\cancel{\left(\frac{3}{2}\right)}\cancel{\frac{2}{3}}x = \frac{\cancel{12}^6}{1}\left(\frac{\cancel{3}}{\cancel{2}}\right)$$
$$x = 18$$