

Intermediate Algebra Skill

Solving Compound Linear Inequalities: Fractional Coefficients

Solve the following Compound Linear Inequalities:

$$1) -3 \leq a - \frac{9}{4} < -\frac{9}{8}$$

$$2) -\frac{5}{2} \leq x + \frac{1}{2} \leq \frac{11}{6}$$

$$3) \frac{47}{6} < n + \frac{19}{6} < \frac{26}{3}$$

$$4) -\frac{7}{5} < -\frac{7}{4}r \leq \frac{7}{8}$$

$$5) -\frac{31}{20} < \frac{1}{2}n \leq \frac{23}{12}$$

$$6) -\frac{41}{12} < \frac{3}{2}n + \frac{11}{6} \leq \frac{29}{6}$$

$$7) -\frac{3}{2} \geq -\frac{4}{3}a - \frac{1}{6} \geq -\frac{17}{6}$$

$$8) -\frac{89}{24} \leq \frac{13}{6}v + \frac{5}{8} < -\frac{19}{6}$$

$$9) n - \frac{1}{8} \leq \frac{11}{8} \text{ or } n - \frac{11}{6} \geq \frac{73}{42}$$

$$10) \frac{9}{2}b - \frac{5}{7} \leq -\frac{167}{28} \text{ and } \frac{12}{7}b + \frac{29}{6} > \frac{59}{42}$$

Answers to Solving Compound Linear Inequalities: Fractional Coefficients

$$1) \frac{-3}{4} \leq a < \frac{9}{8}$$

$$2) -3 \leq x \leq \frac{4}{3}$$

$$3) \frac{14}{3} < n < \frac{11}{2}$$

$$4) -\frac{1}{2} \leq r < \frac{4}{5}$$

$$5) -\frac{31}{10} < n \leq \frac{23}{6}$$

$$6) -\frac{7}{2} < n \leq 2$$

$$7) 1 \leq a \leq 2$$

$$8) -2 \leq v < -\frac{7}{4}$$

$$9) n \leq \frac{3}{2} \text{ or } n \geq \frac{25}{7}$$

$$10) -2 < b \leq -\frac{7}{6}$$