MATH 94 Ellingson

Compound Inequalities #10 - Fractions

Solve each compound inequality and graph its solution.

1) $3x - \frac{3}{2} \geq 3$ or $\frac{3}{2}x + \frac{5}{3} < \frac{7}{6}$

2) $-\frac{3}{2} \leq -\frac{1}{3}b - \frac{5}{3} \leq -\frac{11}{9}$

3) $\frac{1}{2}v + \frac{2}{3} \geq 2$ or $-\frac{3}{2}v + \frac{1}{2} > 6$

4) $-\frac{4}{3}v + \frac{2}{3} \geq \frac{2}{3}$ or $-\frac{3}{2}v + \frac{1}{3} < -\frac{23}{12}$

5) $-\frac{19}{6} < \frac{5}{3}v - \frac{3}{2} \leq \frac{11}{6}$

6) $-\frac{4}{3}x + \frac{1}{2} > -\frac{7}{18}$ and $1 + \frac{5}{2}x \geq -\frac{3}{2}$

7) $1 + \frac{2}{3}a > 1$ and $-\frac{8}{3}a - \frac{11}{3} \geq -9$

8) $\frac{1}{3}x - \frac{4}{3} < -\frac{13}{6}$ or $\frac{2}{3}x + \frac{2}{3} \geq 2$

9) $-2r + \frac{3}{2} < -\frac{11}{2}$ or $\frac{5}{3}r + \frac{4}{3} \leq -\frac{8}{9}$

10) $\frac{3}{2}r + \frac{5}{3} < \frac{11}{3}$ and $2r + \frac{4}{3} \geq \frac{8}{3}$

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

12) $1 - \frac{3}{2}r \leq -2$ or $-\frac{5}{3}r + \frac{5}{3} \geq \frac{15}{2}$

13) $-\frac{4}{3}n + \frac{2}{3} \leq -\frac{8}{3}$ or $-2n + \frac{5}{2} > -\frac{3}{2}$

14) $\frac{3}{2}b + \frac{5}{3} < \frac{1}{6}$ or $\frac{3}{2}b - \frac{8}{3} \geq -\frac{13}{6}$

15) $b + \frac{5}{3} \leq -1$ or $-\frac{1}{2}b + \frac{4}{3} \leq \frac{31}{12}$

16) $2 + \frac{7}{3}x < -\frac{3}{2}$ or $\frac{1}{2}x + \frac{3}{2} \geq \frac{5}{3}$

17) $a + \frac{1}{2} \leq \frac{5}{6}$ and $\frac{5}{2}a + \frac{3}{2} \geq -\frac{13}{3}$

18) $\frac{4}{3}n - \frac{1}{2} \leq -\frac{1}{2}$ and $-\frac{11}{3}n - \frac{3}{2} < -\frac{5}{18}$

19) $\frac{1}{3}n - \frac{5}{3} < -\frac{19}{9}$ or $\frac{5}{3}n + \frac{5}{2} \geq \frac{25}{6}$

20) $-5 < -1 - \frac{3}{2}m \leq -4$