Solve each pair of simulataneous inequalities for the unknown.

1) $3x - 5 < 2x + 3 \leq 5x - 3$

2) $m + 1 \leq 2m + 3 < 5m + 3$

3) $1 + 5x \leq x + 1 < 2x + 2$

4) $3n - 5 \leq -3 + 2n < 4n + 1$

5) $3n + 2 > 5n - 2 \geq n - 2$

6) $2p + 2 \leq -p + 5 < 3p + 5$

7) $x - 1 \leq 5 - x < -x + 2$

8) $-4 - b < 2 + 5b \leq 4b + 2$

9) $n + \frac{5}{3} < -1 + \frac{4}{5}n < \frac{3}{2}n + \frac{1}{3}$

10) $x - \frac{3}{2} \leq 1 - \frac{7}{4}x < \frac{5}{3}x - \frac{1}{4}$

11) $\frac{8}{5}b - \frac{13}{5} \leq \frac{3}{4}b - \frac{3}{2} \leq b + \frac{4}{3}$

12) $\frac{3}{4}r - \frac{2}{5} < -\frac{8}{5}r - \frac{18}{5} \leq -\frac{6}{5}r + \frac{3}{4}$

Answers to 12-05-01-T

1) $2 \le x < 8$
2) $m > 0$
3) $-1 < x \le 0$
4) $-2 < n \le 2$
5) $0 \le n < 2$
6) $0 < p \le 1$
7) No solution.
8) $-1 < b \le 0$
9) No solution.
10) $\frac{15}{41} < x \le \frac{10}{11}$
11) $-\frac{34}{3} \le b \le \frac{22}{17}$
12) $-\frac{87}{8} \le r < -\frac{64}{47}$