

## 12-05-16-T7 Inequalities

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Solve each pair of simultaneous inequalities for the unknown.

1)  $3p - 2 > 2 + 2p$  and  $2 - 4p \geq -5 - 3p$

2)  $-5 + 5k > -5 + 2k$  and  $2 - 5k \leq 2 - 4k$

3)  $4a + 2 \geq 1 + 5a \geq 4a - 4$

4)  $2x - 1 > 3x - 3$  and  $-4 - 3x \leq -x - 2$

5)  $-\frac{4}{3}p + \frac{2}{3} < 2 + \frac{1}{2}p < \frac{3}{2}p - \frac{7}{3}$

6)  $3n - \frac{10}{3} \leq \frac{1}{2}n - \frac{8}{3} \leq -2 + \frac{3}{2}n$

7)  $-\frac{10}{3}x + \frac{3}{2} > 2x - \frac{5}{3} > \frac{3}{2}x - \frac{3}{2}$

8)  $\frac{1}{2}m + \frac{2}{3} < \frac{8}{3}m + \frac{2}{3} \leq 2 + \frac{1}{3}m$

## Answers to 12-05-16-T7 Inequalities

1)  $4 < p \leq 7$

2)  $k > 0$

3)  $-5 \leq a \leq 1$

4)  $-1 \leq x < 2$

5)  $p > \frac{13}{3}$

6)  $-\frac{2}{3} \leq n \leq \frac{4}{15}$

7)  $\frac{1}{3} < x < \frac{19}{32}$

8)  $0 < m \leq \frac{4}{7}$