Objective 2 - Solve Linear Inequalities

Solve linear inequalities.

Link to section in online textbook.

Now, watch this video to learn how to use the properties of inequalities to solve linear inequalities. Inequalities will come up multiple times throughout the semester in different contexts, so be sure to write out notes to yourself about their differences!

Now try to solve the different linear inequalities below.

Question 1 $5\,x + 4 \leq 7\,x - 3$

[3.5 , +∞)

Hint: *There are four boxes so you can input the entire interval. Each option should be:*
(or [
number or ∞
number or ∞
) or]

Question 2 $5\,x + 7 \geq 8\,x + 10$

(−∞ , −1.0]

Question 3 $6\,x + 10 < -4\,x + 7$

(−∞ , −0.3)

Question 4 $9\,x - 3 > -6\,x - 10$

(−0.467 , +∞)

Learning outcomes: Understand and solve linear inequalities.
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Question 5 $-\frac{3}{2}x - \frac{1}{3} < -\frac{3}{8}x + \frac{4}{5}$

$\boxed{(}\ \boxed{-1.007}, \boxed{+\infty}\ \boxed{)}$

Question 6 $\frac{6}{7}x + \frac{4}{9} > -\frac{3}{4}x + \frac{5}{4}$

$\boxed{(}\ \boxed{0.501}, \boxed{+\infty}\ \boxed{)}$

Question 7 $3x + \frac{5}{8} \leq -\frac{4}{7}x + \frac{3}{4}$

$\boxed{(}\ \boxed{-\infty}, \boxed{0.035}\ \boxed{]}$

Question 8 $\frac{8}{7}x - \frac{4}{3} \geq \frac{5}{4}x - \frac{1}{2}$

$\boxed{(}\ \boxed{-\infty}, \boxed{-7.778}\ \boxed{]}$
