

AM: Solve Inequalities with Rational Expressions

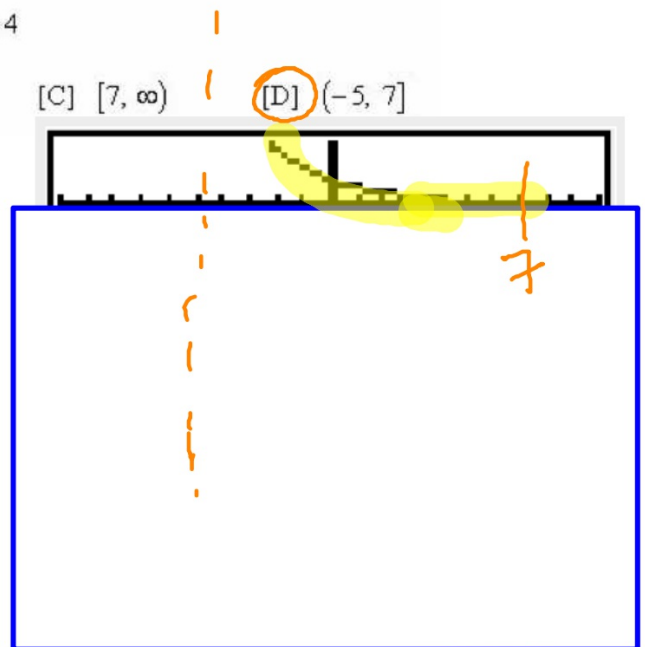
2. Find the solution set in interval notation: $\frac{x+41}{x+5} \geq 4$

- [A] $(-\infty, -5) \cup [41, \infty)$ [B] $(-5, 41]$ [C] $[7, \infty)$ [D] $(-5, 7]$

$$\frac{x+41}{x+5} - 4 \frac{(x+5)}{(x+5)} \geq 0$$

$$\frac{x+41-4x-20}{x+5} \geq 0$$

$$\frac{-3x+21}{x+5} \geq 0$$



AM: Solve Inequalities with Rational Expressions

Solve:

LCD: 20

$$3. \frac{21}{20} - \frac{1}{5}x + \frac{19}{20} \geq 5x - \frac{6}{5}$$

[A] $x \leq \frac{8}{13}$

[B] $x \leq \frac{2}{3}$

[C] $x \geq \frac{8}{13}$

[D] none of these

$$\cancel{20} \frac{21}{\cancel{20}} - \frac{1}{\cancel{5}} x \cdot \cancel{20}^4 + \frac{19 \cdot \cancel{20}}{\cancel{20}} \geq 20 \cdot 5x - \frac{6}{\cancel{5}} \cdot \cancel{20}^4$$

$$21 - 4x + 19 \geq 100x - 24$$

$$\begin{array}{r} -4x + 40 \\ +4x + 24 \end{array} \geq \begin{array}{r} 100x - 24 \\ +4x + 24 \end{array}$$

$$\frac{64}{104} \geq \frac{104x}{104}$$

$$\frac{8}{13} \geq x$$



Slide 2-19