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TR Class 11:30 (Take 11 bc I messed up)

1.5 Solving Inequalities

$(2, 3]$ (Not included)

$[2, 3]$ [Included]

$[2, \infty)$ Inf always has parentheses

$(-\infty, 0)$

13)

$[-7, 3)$ Interval "Shading becomes ∞"

$-7 \leq x < 3$ Inequality

12) $[-5, \infty)$ Interval

$x \geq -5$ Inequality

44) $(x+1)(x-4) > (x-2)(x+2)$

$\cancel{x^2} - x - 12 > \cancel{x^2} - 4$

$+4 \qquad +4$

$-x - 8 > 0$

$-x > 8$

$\boxed{x < -8}$ Inequality

$(-\infty, -8)$ Interval

39) $\frac{x}{4} \geq 4 - \frac{x}{8}) \times 8$

$2x \geq 32 - x$

$+x \qquad +x$

$3x \geq 32$

$x \geq \frac{32}{3}$

$[\frac{32}{3}, \infty)$

40) $-9 < 2x - 1 < 1$

$+1 \qquad +1 \qquad +1$

$\frac{-8}{7} < \frac{2x}{7} < \frac{2}{2}$

$-4 < x < 1$

$(-4, 1)$

48) Solve

"Jealous Method"

$\frac{1}{3} \leq \frac{x+1}{5} < \frac{9}{10}$

$\frac{1 \cdot 5 \cdot 2}{3 \cdot 5 \cdot 2} \leq \frac{(x+1)6}{5 \cdot 6} < \frac{9(3)}{2 \cdot 5(3)}$

09.10.2019 11:29a Sections 1.5 (All) and 1.6 (Start) 9/16/19, 7:29 AM, 1h 18m 53s

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TR Class 11:30 (Take 11 bc I messed up)

1.5 Solving Inequalities

$(2, 3)$ (Not included)

$[2, 3]$ [Included]

$[2, \infty)$ Inf always has parentheses

$(-\infty, 0)$

13) $[-7, 3)$ Interval "Shading between"

$-7 \leq x < 3$ Inequality

12) $[-5, \infty)$ Interval

~~x~~ $x \geq -5$ Inequality

39) $\frac{x}{4} \geq 4 - \frac{x}{8}$ $\times 8$

$2x \geq 32 - x$

$+x$

$3x \geq 32$

$x \geq \frac{32}{3}$

$[\frac{32}{3}, \infty)$

44) $(x+1)(x-4) > (x-2)(x+2)$

$x^2 - x - 12 > x^2 - 4$

$+4 \quad +4$

$-x - 8 > 6$

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$x < -8$ Inequality

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40) $-9 < 2x - 1 < 1$

$+1 \quad +1 \quad +1$

$-8 < 2x < 2$

$\frac{-8}{2} < \frac{2x}{2} < \frac{2}{2}$

$-4 < x < 1$

$(-4, 1)$

48) Solve "Jealous Method"

$\frac{1}{3} \leq \frac{x+1}{5} < \frac{9}{10}$

$\frac{1}{3} \cdot 5 \cdot 2 \leq \frac{(x+1)}{5} 10 < \frac{9}{2 \cdot 5} (3)$

$\frac{10}{30} \leq \frac{6(x+1)}{30} < \frac{27}{30}$

$10 \leq 6(x+1) < 27$

$10 \leq 6x+6 < 27$

$-6 \quad -6 \quad -6$

$4 \leq 6x < 21$

$\frac{4}{6} \leq \frac{6x}{6} < \frac{21}{6}$

$\frac{2}{3} \leq x < \frac{7}{2}$

$\left[\frac{2}{3}, \frac{7}{2}\right)$

1.6 Abs. Value

1.6.1) $|x|+1=8$

$|x|=7$

$x=7$

$x=-7$

1.6.2) $|2x-7|-3=2$

$+3 \quad +3$

$|2x-7|=5$

$2x-7=5 \quad 2x=12 \quad x=6$

$2x-7=-5 \quad 2x=2 \quad x=1$

15 - Now you try!

$2-|2x|=1$

$-2 \quad -2$

$-|2x|=-1$

$|2x|=1$

$2x=1 \quad 2x=-1$

$x=-\frac{1}{2}$ Hey (sorry)

$x=\frac{1}{2}$

$\{-\frac{1}{2}, \frac{1}{2}\}$

5 steps from zero & 5 and -5

0 steps from zero 0

-3 steps from zero $\{\}$ $\emptyset$

$\rightarrow \bigstar = -1 \quad \bigstar = 1$

$\rightarrow$ Nope

$\rightarrow \bigstar = 0$

19) $\left|\frac{9x-5}{5x-4}\right| = 0$

$|\bigstar| = 0$

$\bigstar = 0$

$\frac{9x-5}{5x-4} = 0$

num = 0

$9x-5=0$

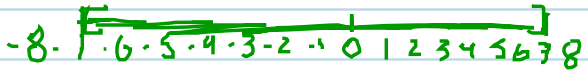
$9x=5$

$x=5/9$

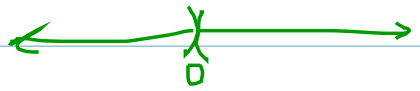
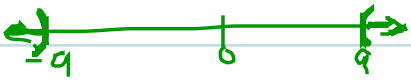
1, 6, 5)

30)

$|x| \leq 7$



1, 6, 6)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