

Journal:

Math Club members are selling Pi Day T-shirts for \$7.50 each. The goal is to raise \$500 by Friday. The figure shows how much they have raised so far. What is the minimum number of shirts they must sell in order to reach their goal? Explain.



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## Section 3-4 Solving Multi-step Inequalities

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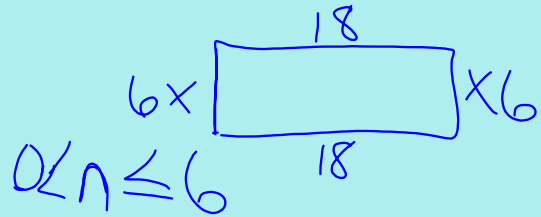
Solving multistep inequalities is the same process as solving multistep equations.

Solve:

$$\begin{aligned}
 -4 < 5 - 3n \\
 -5 & -5 \\
 \hline
 -9 < -3n \\
 \frac{-9}{-3} & \frac{-3n}{-3} \\
 3 > n
 \end{aligned}$$

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You want to make a rectangular banner that is 18 ft long. You have no more than 48 ft of trim for the banner. What are the possible widths of the banner?



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Solve:

$$\begin{aligned}
 15 < 5 - 2(4m + 7) \\
 15 < 5 - 8m - 14 \\
 15 < -9 - 8m \\
 +9 & +9 \\
 \hline
 24 < -8m \\
 \frac{24}{-8} & \frac{-8m}{-8} \\
 -3 > m
 \end{aligned}$$

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Solve:

$$\begin{aligned}
 3b + 12 > 27 - 2b \\
 +2b & +2b \\
 \hline
 5b + 12 > 27 \\
 -12 & -12 \\
 \hline
 5b > 15 \\
 \frac{5b}{5} & \frac{15}{5} \\
 b > 3
 \end{aligned}$$

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Solve:

$$9 + 5n \leq 5n - 1$$

$$\begin{array}{r} -5n \\ -5n \end{array} \\ 9 \leq -1 \quad \emptyset$$

$$8 + 6x > 7x + 2 - x$$

$$8 > 2 \quad \mathbb{R}_S$$

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Without working out, can you tell what the solution to  $3t + 1 > 3t + 2$  is? How?

False

 $\emptyset$ 

because

 $3t + 1$  is always smaller

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Hwk: pg. 190 -192  
 #18 - 26 (4th), 30 - 46 (even),  
 47, 48, 51, 56

Quiz tomorrow

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