

Classwork 1  
Precalculus MTH 130  
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Name: SOLUTIONS

1. Solve the inequality  $3 \leq 5x + 7 \leq 15$  and plot the solution. □

$$-4 \leq 5x \leq 8$$

$$-0.8 = \frac{-4}{5} \leq x \leq \frac{8}{5} = 1.6$$

$$-0.8 \leq x \leq 1.6$$

2. Solve the inequality  $x^2 - 7x + 12 > 0$  and plot the solution. □

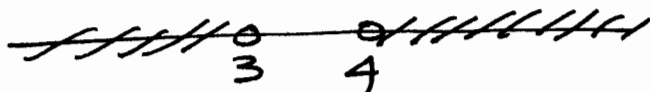
$$x^2 - 7x + 12 = 0$$

$$(x - 3)(x - 4) = 0$$

$$x = 3, 4$$

|         | $(-\infty, 3)$ | $(3, 4)$           | $(4, \infty)$ |
|---------|----------------|--------------------|---------------|
| Test pt | $x = 0$        | $x = 7/2$          | $x = 5$       |
| Value   | $12 > 0$       | $-\frac{1}{4} < 0$ | $2 > 0$       |

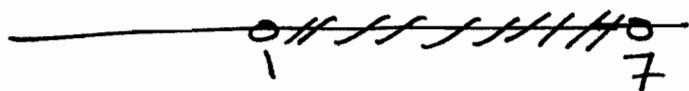
$$(-\infty, 3) \cup (4, \infty)$$



3. Solve the inequality  $|x - 4| < 3$  and plot the solution. □

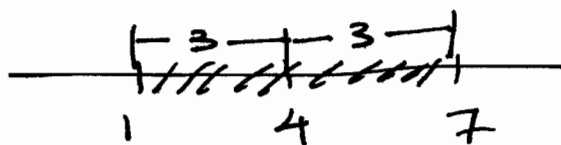
$$-3 < x - 4 < 3$$

$$1 < x < 7$$



OR

All pts whose distance from 4 is at most 3



$$1 < x < 7$$