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§2.4 continued

$$\frac{62+82+66+66+f+f}{6} \geq 70$$

$$\frac{276+2f}{6} \geq 70$$

$$\cancel{6}^{1} \cdot \frac{276+2f}{\cancel{6}_{1}} \geq 6 \cdot 70$$

$$276+2f \geq 420$$

$$-276 \quad -276$$

$$2f \geq 144$$

$$\frac{2f}{2} \geq \frac{144}{2}$$

$$f \geq 72$$

final exam score ≥ 72

Final exam score must be 72 or higher to pass.

livescribe

§2.4 continued

$$\frac{62+82+66+66+f+f}{6} \geq 70$$

$$\frac{276+2f}{6} \geq 70$$

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$$-276 \quad -276$$

$$2f \geq 144$$

$$\frac{2f}{2} \geq \frac{144}{2}$$

$$f \geq 72$$

final exam score ≥ 72

Final exam score must be 72 or higher to pass.

$A = \{x \mid x \text{ is an even integer}\}$

$A = \{\ldots -4, -2, 0, 2, 4, 6, 8, 10, 12 \ldots\}$

$D = \{9, 10, 11, 12\}$

$A \cap D = \{10, 12\}$

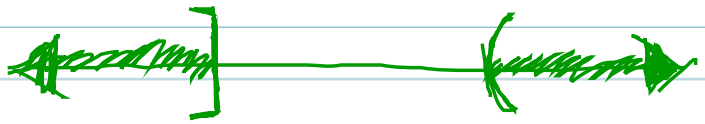
25.17 Solve. Interval.

$x < -1$ and $x < 1$

$(-\infty, -1)$

2.5.15 Solve Interval.

$x \leq 1$ and $x > 3$



1 3

No Solution $\varnothing$

There is no overlap / intersection

2.5.19 Solve. Interval

$-x - 8 \geq -8$ and $x + 9 \geq 8$

$+8 \quad +8$ $\qquad$ $-9 \quad -9$

$-x \geq 0$ $\qquad$ $x \geq -1$

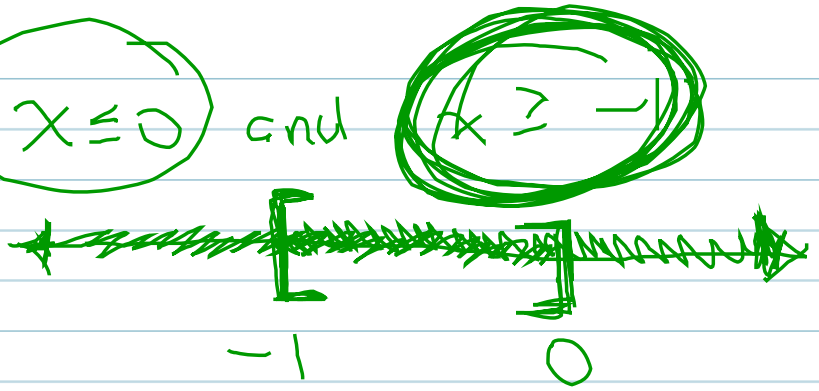
$\frac{-1x}{-1} \geq \frac{0}{-1}$

$x \leq 0$ and $x \geq -1$

No Solution $\emptyset$

0

$x \leq 0$ and $x \geq -1$



$[-1, 0]$

2.5.93

70 to 79

71 to 77

$$70 \leq \text{average} \leq 79$$

$$70 \leq \frac{71+69+80+72+2f}{6} \leq 79$$

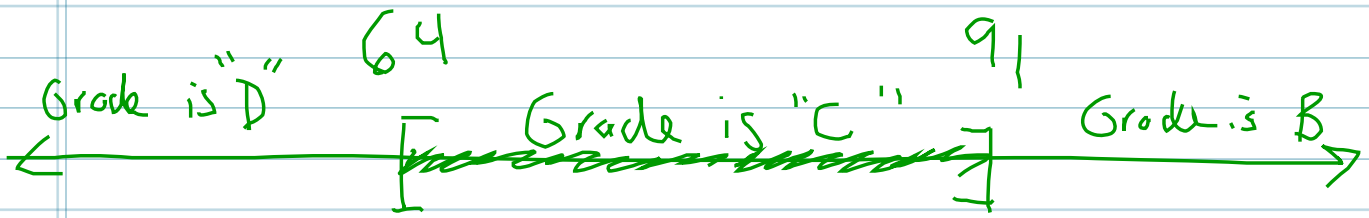
$$70 \leq \frac{292+2f}{6} \leq 79$$

$$6 \cdot 70 \leq 6 \cdot \frac{292+2f}{6} \leq 6 \cdot 79$$

$$420 \leq 292+2f \leq 474$$

$$420 \leq 292 + 2f \leq 474$$
$$-292 \quad -292 \quad -292$$
$$128 \leq 2f \leq 182$$
$$\frac{128}{2} \leq \frac{2f}{2} \leq \frac{182}{2}$$
$$64 \leq f \leq 91$$
$$64 \leq \text{final exam score} \leq 91$$

Thomas must score <u>between</u> 64 and 91 to earn a "C" in his algebra class



2.5.1

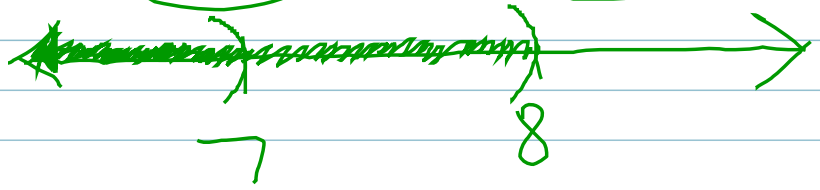
$C = \{2, 3, 4, 5\}$

$D = \{4, 5, 6, 7\}$

$C \cup D = \{2, 3, 4, 5, 6, 7\}$

2.5.33 Solve Interval

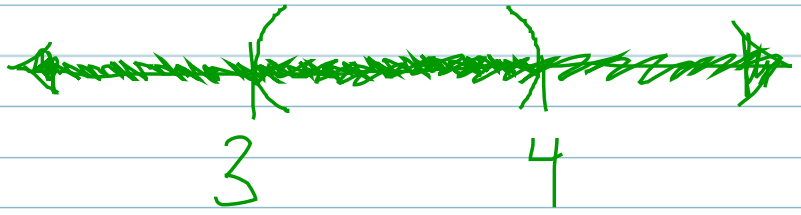
$x < 7$ or $x < 8$



$(-\infty, 8)$

2.5.37 Solve: Interval.

$x > 3$ or $x < 4$



$(-\infty, \infty)$

DJL

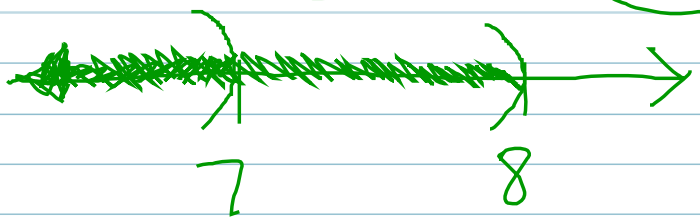
$C = \{2, 3, 4, 5\}$

$D = \{4, 5, 6, 7\}$

$C \cap D = \{4, 5\}$

DJL

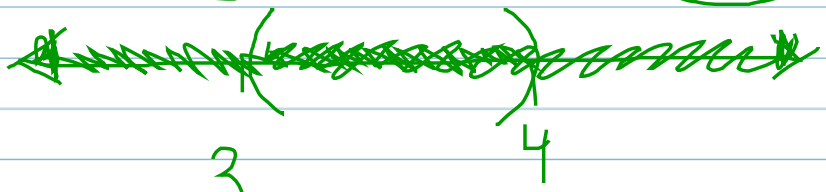
$x < 7$ and $x < 8$



$(-\infty, 7)$

DJL

$x > 3$ and $x < 4$



$(3, 4)$

2.5.43 Solve. Interval.

$-2(x-3) > -4$ or $x+8 > 11$

$-2x+6 > -4$

$-6 \quad -6$

$-2x > -10$

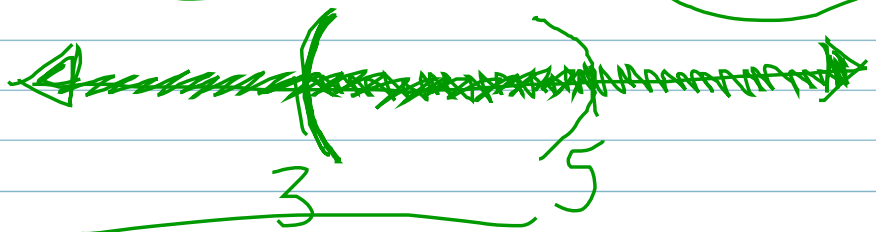
$\frac{-2x}{-2} < \frac{-10}{-2}$

$x < 5$

$-8 \quad -8$

$x > 3$

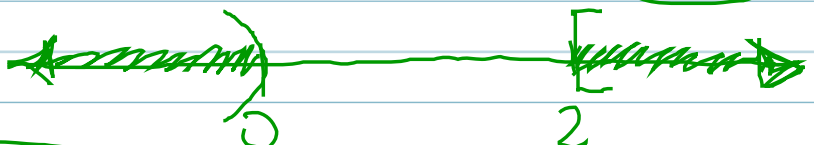
$x < 5$ or $x > 3$



$(-\infty, \infty)$

DJL

$x < 0$ or $x \geq 2$



$(-\infty, 0) \cup [2, \infty)$