H/W Review:

p. 387 #8

$5n + 2 > -18$ or $-3(n+4) > 21$

$-2 \quad -2$

$\frac{5n}{5} > \frac{-20}{5}$

$n > -4$

$-3n - 12 > 21$

$+12 \quad +12$

$\frac{-3n}{-3} > \frac{33}{-3}$

$n < -11$

#40 p. 386

$\$5{,}319 \leq p \leq \$33{,}592$

(42) h = skier's height

150–220 cm (range available)

$1.16h$ = recommended length

$$\frac{150}{1.16} \leq \frac{1.16h}{1.16} \leq \frac{220}{1.16}$$

$$129.31 \text{ cm} \leq h \leq 189.66 \text{ cm}$$

$h < 129.31$ cm

$h > 189.66$ cm

Announcements:

- Skills test tomorrow - Tues. 11/4 solving/graphing inequalities
- Unit test - Sections 6.1-6.5 Wed. 11/5

Solving absolute value equations:

- Absolute value: always positive
  - distance a # is from 0

$|a| = a$, if a is positive

$|a| = (-1)a$, if a is negative

$|4| = 4$

$|-3| = (-1)(-3) = 3$

$|x| = 7$, what is x?

$x = 7$ or $x = -7$

$|x| = -4$ no solution

$-|x| = -3$ $x = 3$ or $x = -3$

$$|x+5| = 12$$

$x+5=12$ or $x+5=-12$

$-5\ -5$ $\quad$ $-5\ \ -5$

$x=7$ or $x=-17$

$|7+5| = 12$ $\quad$ $|-17+5| = 12$

$\checkmark\ |12| = 12$ $\quad$ $\checkmark\ |-12| = 12\checkmark$

$$3|2x-7|-5=4$$

$$+5 \quad +5$$

$$\frac{3|2x-7|}{3}=\frac{9}{3}$$

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

$$2x-7=3 \qquad 2x-7=-3$$

$$+7 \quad +7 \qquad +7 \quad +7$$

$$\frac{2x}{2}=\frac{10}{2} \qquad \frac{2x}{2}=\frac{4}{2}$$

$$x=5 \quad \text{or} \quad x=2$$

6. $|2x - 3| = 15$

$2x - 3 = 15$ $\quad$ $2x - 3 = -15$

$2x = 18$ $\quad$ $2x = -12$

$x = 9$ or $x = -6$

8. $|7x + 2| = 23$

$7x + 2 = 23$ $\quad$ $7x + 2 = -23$

$7x = 21$ $\quad$ $7x = -25$

$x = 3$ or $x = \frac{-25}{7}$

10. $\frac{|3|2x - 2|}{3} = \frac{18}{3}$

$|2x - 2| = 6$

$2x - 2 = 6$ $\quad$ $2x - 2 = -6$

$2x = 8$ $\quad$ $2x = -4$

$x = 4$ or $x = -2$

12. $2|6x + 5| - 1 = 25$

$\frac{2|6x+5|}{2} = \frac{26}{2}$

$|6x + 5| = 13$

$6x + 5 = 13$ $\quad$ $6x + 5 = -13$

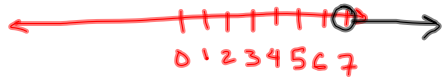
$6x = 8$ $\quad$ $6x = -18$

$x = \frac{8}{6}$ $\quad$ $x = -3$

OR

$x = \frac{4}{3}$

$x > 7$



$x \leq -4$

$x + 5 \geq 7$

$-5 \quad -5$

$x \geq 2$

$3x + 7 < 28$

$-7 \quad -7$

$\frac{3x}{3} < \frac{21}{3}$

$x < 7$

$-2x - 4 \geq 6$

$+4 \quad +4$

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

$x \leq -5$

$7(r + 3) \geq -13$

$7r + 21 \geq -13 + 21$

-21

$\frac{7r}{7} \geq \frac{8}{7}$

$r \geq \frac{8}{7}$