§2.4 #s 10, 24, 52, 59, 69

§2.5 #s 14, 16, 20 (more to come)

Practice: Vocab & Readiness probs.

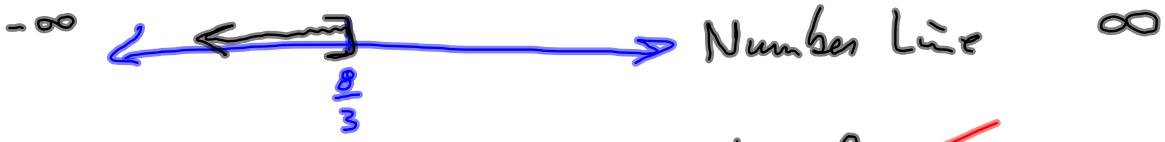
## §2.4 Linear Inequalities

$3x - 2 \leq 6$

$3x \leq 8$

$\{x \mid x \leq \frac{8}{3}\}$ Set-builder

Just like equations, ALMOST

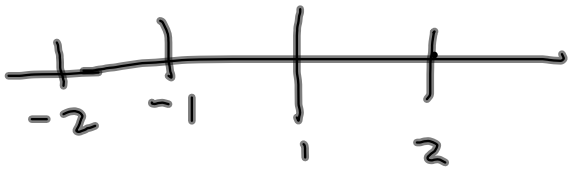



$(-\infty, \frac{8}{3}]$ Interval ✓

$-6x + 3 > 2$

$-3 = -3$

$-6x > -1$




$\frac{-6x}{-6} > \frac{-1}{-6}$

Noo!!!

$-6x + 3 > 2$

$-3 = -3$

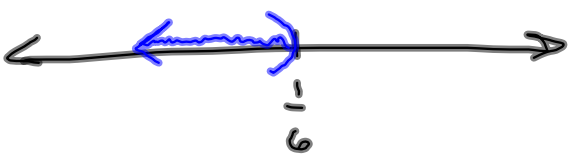
$-6x > -1$

$\frac{-6x}{-6} < \frac{-1}{-6}$

$\{x \mid x < \frac{-1}{-6}\}$

$\{x \mid x < \frac{1}{6}\}$ is cleaner.

$\frac{}{-6}$ $\frac{}{-6}$




$(-\infty, \frac{1}{6})$

$\leq$ Square

$<$ Round

§2.2 Stuff?

#49 The 1st angle is twice the 2nd
The 3rd .. .. 3 times the 2nd
decrease by 12

Let $x$ = 1st angle (in degrees)
$\frac{1}{2}x$ = 2nd angle
$3(\frac{1}{2}x) - 12$ = 3rd angle

Let $x$ = 2nd angle (in degrees)
$2x$ = 1st angle
$3x - 12$ = 3rd angle

$x + 2x + 3x - 12 = 180$ ✓

309

$6x - 12 = 180$

$6x = 192$

$x = 32^\circ$
$2x = 64^\circ$
$3x - 12 = 84^\circ$

#67 §2.2

$$x + 1.54x = 784$$

$x$ = the # of pages in the 1st Book.

The last book has 784 pages, an increase of 154%

$$x + 1.54x = 784$$

$x$: original #; $1.54x$: the increase

$$1x + 1.54x = (1 + 1.54)x = 2.54x$$

$$100 + .07(100) = 100 + 7 = 107$$

$$2.54x = 784$$

$$x = \frac{784}{2.54} \approx 309$$

$$1.54x = 784$$

$$x = \frac{784}{1.54} \approx 509$$

$$509 - 200 = 309 \text{ pages.}$$