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5 days until the Ch. 3 Test!!

Finish 3.5 (pp. 48–50)
All of 3.7 (pp. 51–55)
Start 5.7 (pp. 56–?)

Page 48) Point Slope form

$$y - y_1 = m(x - x_1)$$

3.5.17

Slope: $\frac{5}{6}$ through: $(-18, 6)$

$m = \frac{5}{6}$ x_1, y_1

$y - y_1 = m(x - x_1)$

$y - 6 = \frac{5}{6}(x - (-18))$

$y - 6 = \frac{5}{6}(x + 18)$ ← in point slope form

Convert to slope-intercept form ($y = mx + b$)

$y - 6 = \frac{5}{6}(x + 18)$

$y - 6 = \frac{5}{6}x + \frac{5}{1} \cdot \frac{18^3}{1}$

$y - 6 = \frac{5}{6}x + 5 \cdot 3$

$y - 6 = \frac{5}{6}x + 15$

$+6 \qquad +6$

$y = \frac{5}{6}x + 21$ ← Slope-intercept form

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5 days until the Ch. 3 Test!!

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Page 48 Point Slope form

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$y - 6 = \frac{5}{6}x + 15$

$+6 \qquad +6$

$y = \frac{5}{6}x + 21$ ← slope-intercept form

3.5.51 Find the equation of the line through $(-18, 6)$ and Parallel to $-5x + 6y = 300$

Express answer in Slope-intercept form.

Point: $(-18, 6)$ ← not a y-intercept. Just a point!

Slope: $\frac{5}{6}$

Use Point Slope form

$y - y_1 = m(x - x_1)$

$-5x + 6y = 300$

$+5x \qquad +5x$

$\frac{6y}{6} = \frac{5x + 300}{6}$

$y = \underbrace{\frac{5}{6}}_{m}x + 50$

$y - 6 = \frac{5}{6}(x - (-18))$

See #17

$$\boxed{y = \frac{5}{6}x + 21}$$

3.5.49 Find the line with these qualities:

through $(0, 2)$

perpendicular to $3y = x - 12$

express answer in Slope-intercept form.

Point: $(0, 2)$ ← y-intercept (x is zero)

Slope: -3

$3y = x - 12$

$y = \frac{1}{3}x - 4$

our Slope is the opposite reciprocal of $\frac{1}{3}$, which is -3

Plug into $y = mx + b$

$$y = -3x + 2$$

Find an equation of the line through $(0, 371)$ and $(10, 574)$
x_1, y_1 x_2, y_2

Answer in Slope-intercept form.

Point: $(0, 371)$ ← y-intercept (x is zero)

Slope: $\frac{203}{10}$

Use $\frac{y_2 - y_1}{x_2 - x_1}$ to find Slope

$$\frac{574 - 371}{10 - 0} = \frac{203}{10} = m$$

$$y = mx + b$$

$$y = \frac{203}{10}x + 371$$

3.5.79

$y = \frac{203}{10}x + 371$

↑ # of Med. Assistants in thousands

↑ Value associated with year

x	y
0	2008
1	2009
2	20010
↓	↓
9	2017

$y = \frac{203}{10}\left(\frac{9}{1}\right) + 371$

$y = \frac{1827}{10} + 371$

$y = 553.7$ thousand

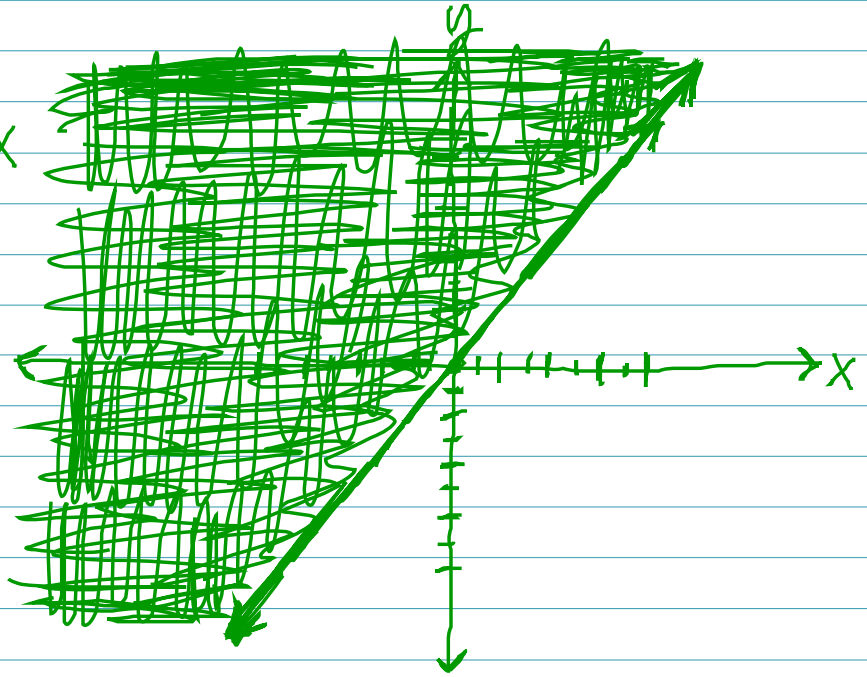
553,700 medical assistants.

3.7

3.7.1

(e) $y \geq \frac{8}{7}x$

- Solid line
- Shade up (above line)



(a) $y <$ down

(b) $y >$ up

(c) $x \geq$ right

(d) $x \leq$ left

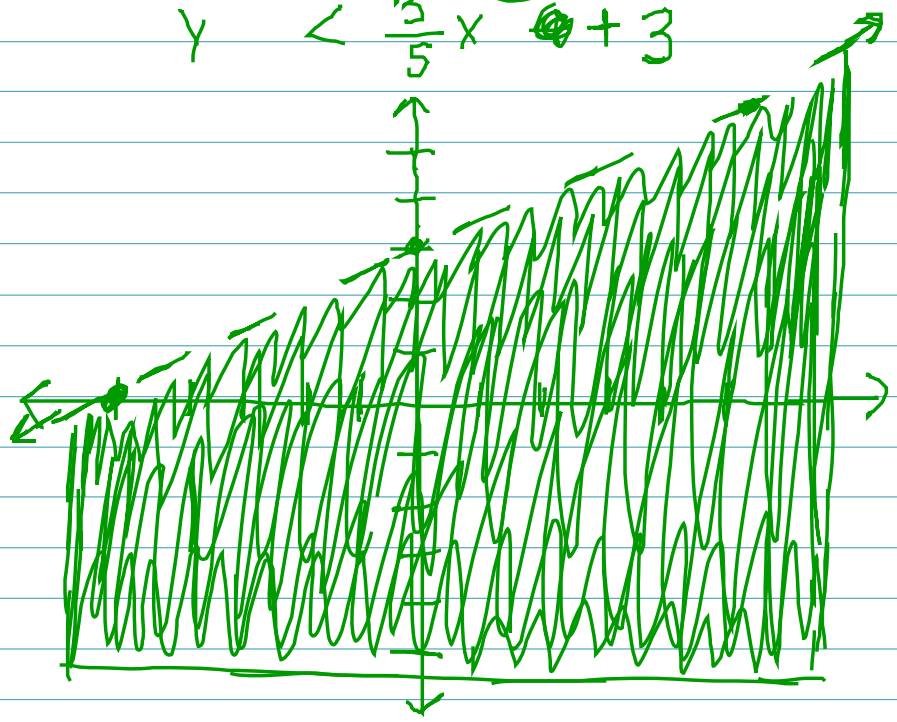
(e) $y \geq$ up

3.7.31 Graph

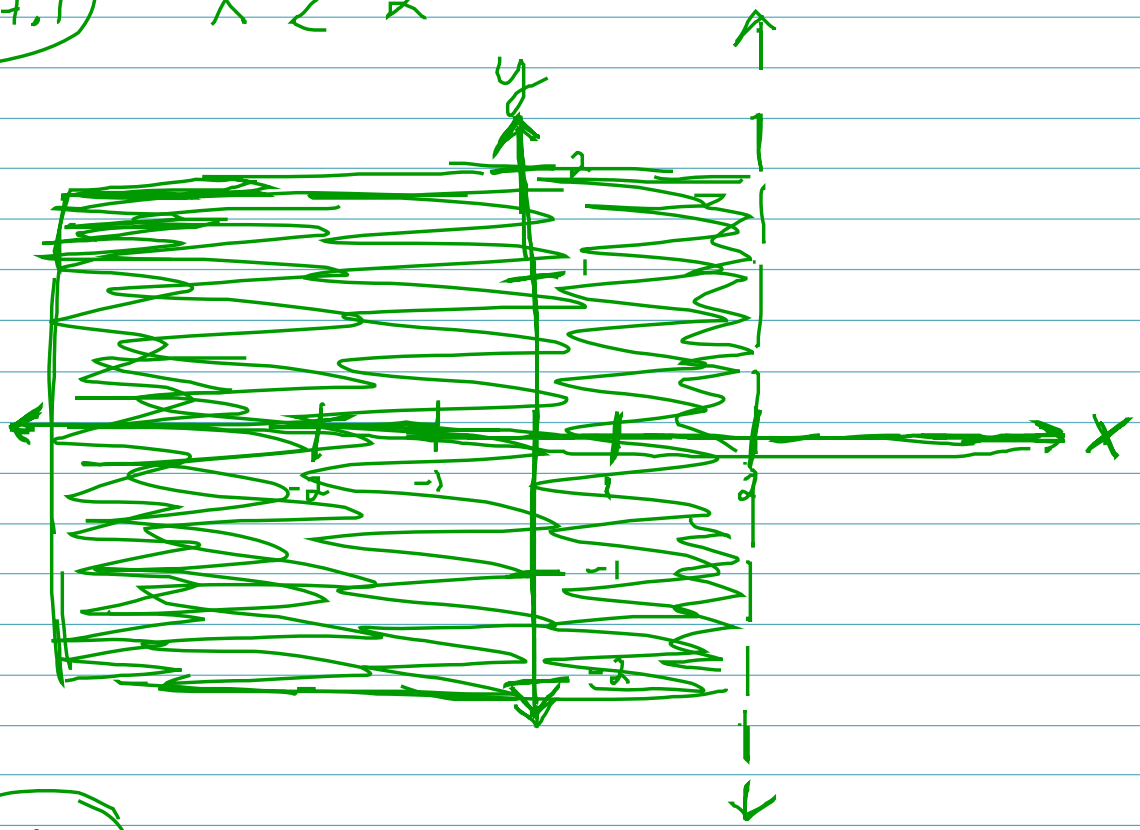
$3x - 5y > -15$

$\frac{-5y}{-5} > \frac{-3x - 15}{-5}$

$y < \frac{3}{5}x + 3$

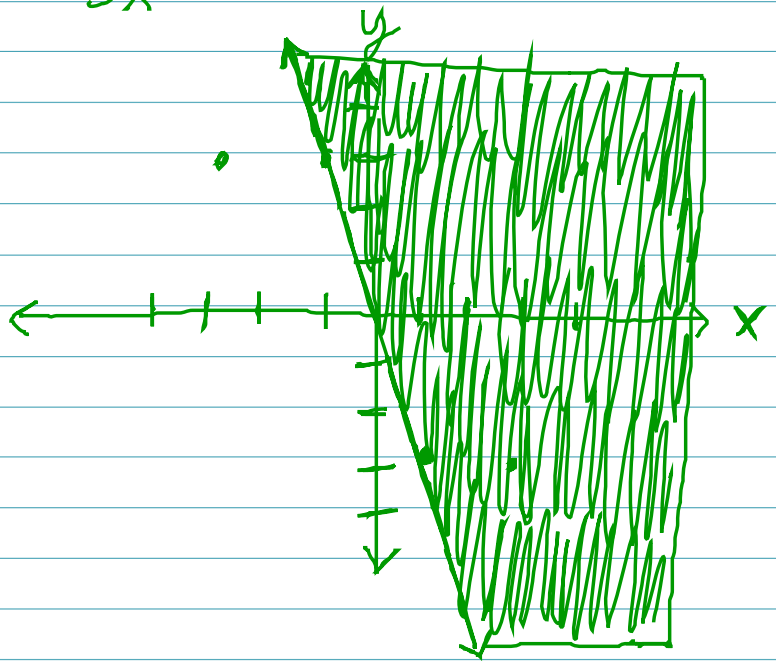


3.7.1 $x < 2$



3.7.7 $y \geq -3x + 0$

- Solid
- Shade up



SShh..
ignore those extra dots !!

5.7

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