



# Homework review - 7.6

(39)

$x$  : age in years

$x \geq 20$  and

$x \leq 65$

$y$  : heart rate

Maximum h.r.:  $220 - x$

heart rate  $\geq 70\%$  of max h.r.

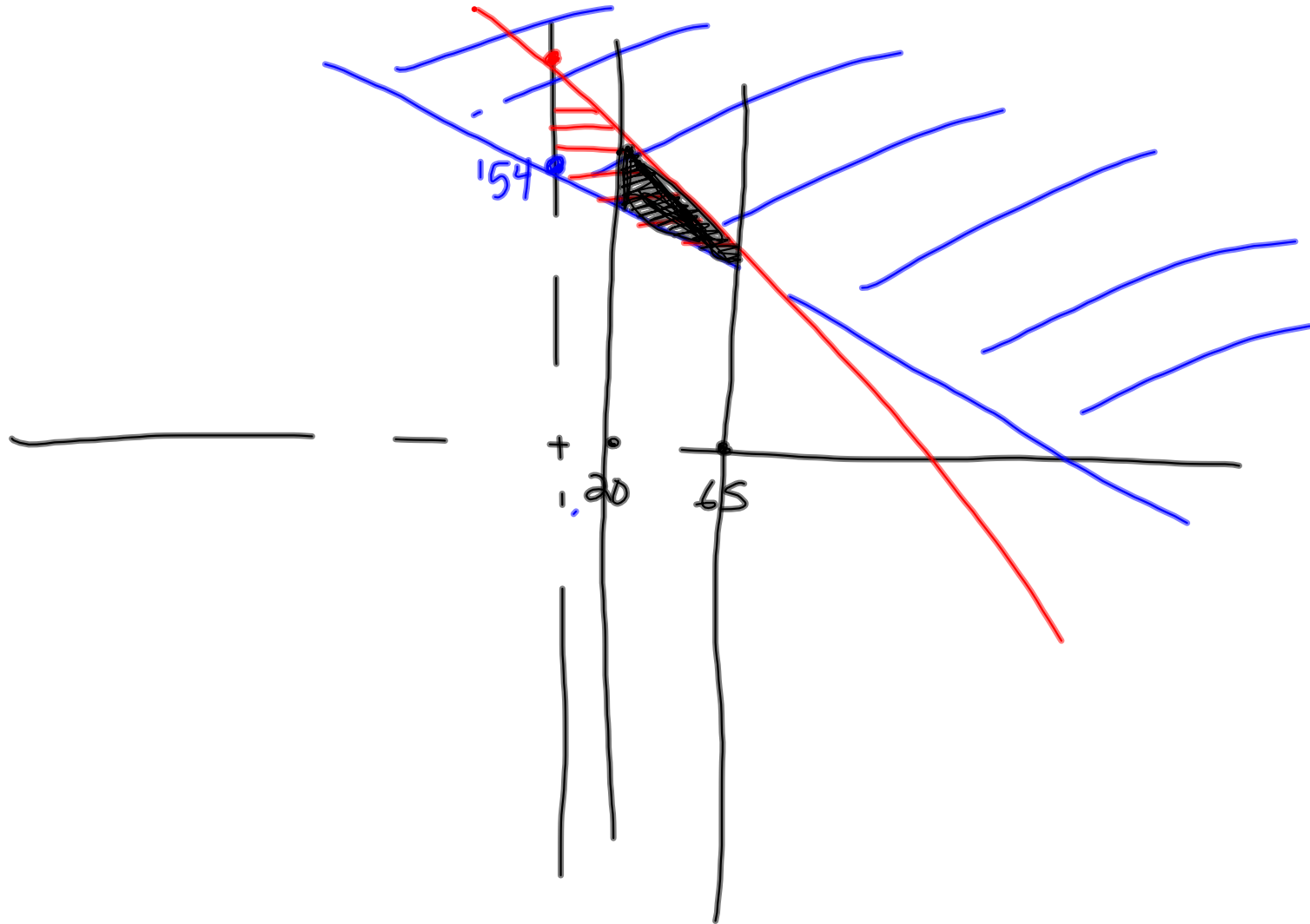
heart rate  $\leq 85\%$  of max h.r.

$$y \geq .7(220 - x) = 154 - \frac{7}{10}x$$

$$y \leq .85(220 - x) = 187 - \frac{17}{20}x$$

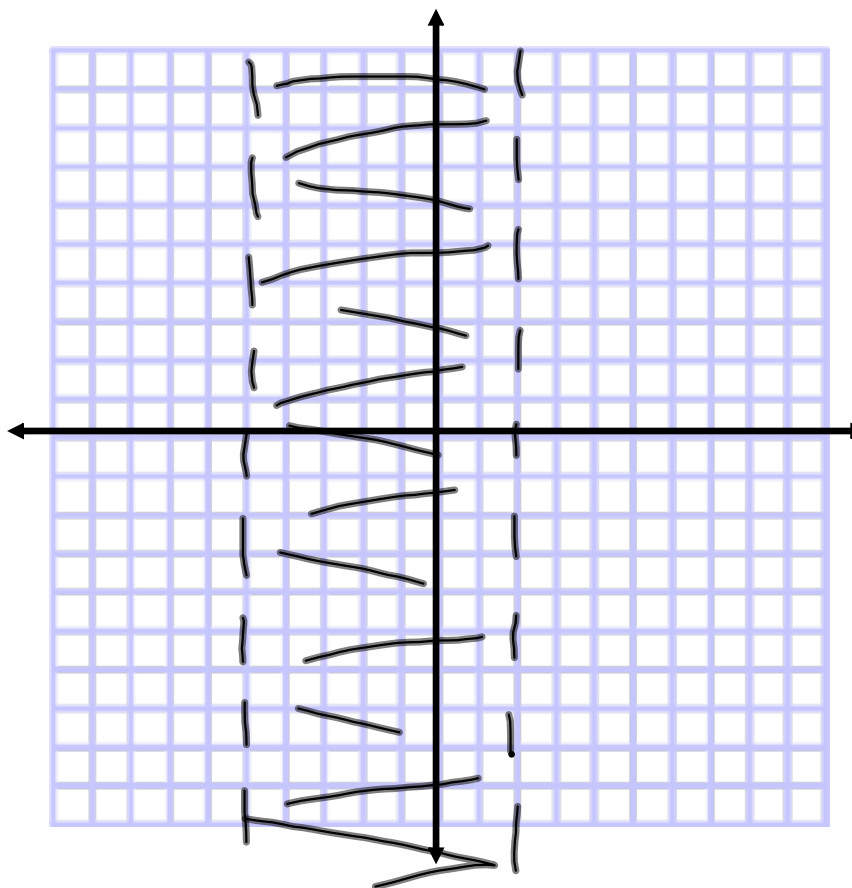
$$\begin{array}{r} 220 \\ .7 \\ \hline 154.0 \\ 220 \\ .85 \\ \hline 1100 \\ 17600 \\ \hline 187.00 \end{array}$$

$$\frac{85}{100} = \frac{17}{20}$$



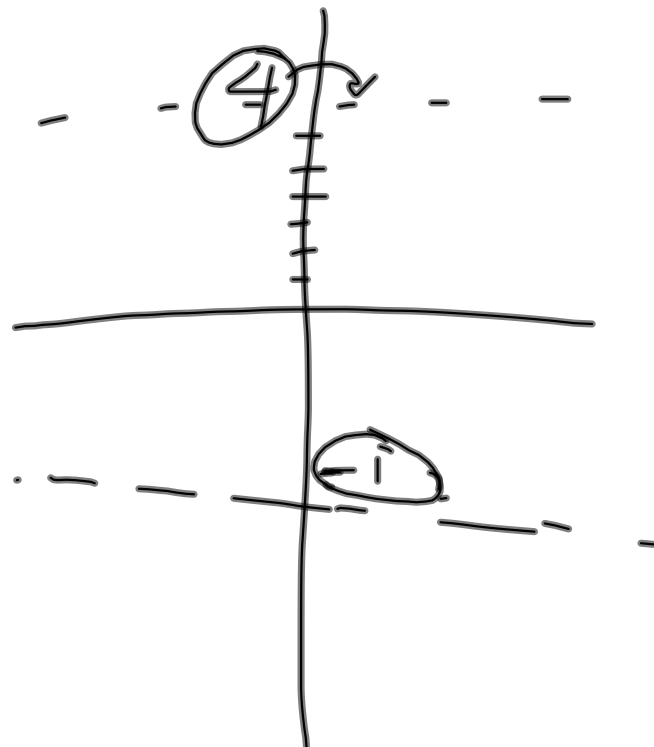
$$x > -5$$

$$x < 2$$



$$y < 4$$

$$y > -1$$



## Integer arithmetic review:

★ Change all subtraction to adding a negative!

$$4 - 2 = 4 + -2$$

$$17 - x = 17 + -x$$

ex.

$$3x - 5(x - 6) = 3x + -5(x + -6)$$

$$3x + 5x - 30$$

$$3x + -5x + 30$$

$$\star -x = -1x$$

$$-x = 30 = \frac{-1x}{-1} = \frac{30}{-1}$$

$$x = -30$$

mult. / div. :

+ times + = +

+ times - = -

- times + = -

- times - = +



add. / sub.

+ plus + = + } sum  
 - plus - = -

+ plus - = ? } diff.

→ - if this is larger  
 → + if this is larger

# Fraction arithmetic:

★ Change subtraction to adding a negative

$$\frac{1}{2} - \frac{2}{3} = \frac{1}{2} + \frac{-2}{3}$$

$$\boxed{\frac{-2}{3}} = \frac{2}{-3} = -\frac{2}{3}$$

$$-\frac{2x+3}{4} = \frac{2x+3}{-4} = \frac{-(2x+3)}{4}$$

$$= \boxed{\frac{-2x-3}{4}}$$

Adding/subtracting:

get  
common  
denominator

$$\frac{10}{15} \cdot \frac{2}{3} + \frac{-4}{5} \cdot \frac{3}{3}$$

$$\frac{10}{15} + \frac{-12}{15} = \frac{-2}{15}$$

Multiplying:

multiply across  $\frac{2}{3} \cdot -\frac{4}{9} = \frac{-8}{27}$

m.a.

m.a.

mama



Dividing:

D |  ~~$\frac{2}{3} \div -\frac{4}{5}$~~

$\frac{2}{3} \cdot -\frac{5}{4} = \frac{-10}{12}$

$\begin{array}{r} 10 \\ - \\ -12 \end{array}$  | DING

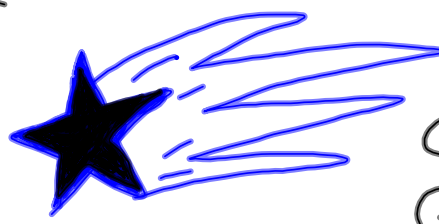
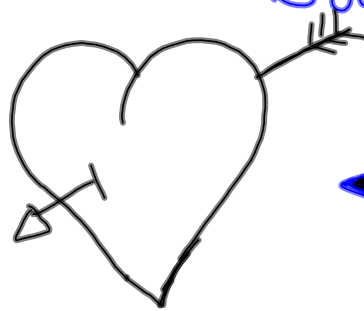
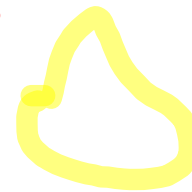
Reducing:

$$\frac{21}{49} = \frac{7 \cdot 3}{7 \cdot 7} = \frac{3}{7}$$

$$\frac{-2}{-3} = \frac{-1 \cdot 2}{-1 \cdot 3} = \frac{2}{3}$$

$$\frac{415}{2380}$$

$$\frac{5 \cdot 83}{5 \cdot 476}$$



Silly<sup>3</sup> hi:)