

Sample: x, y

$$1x + 1y = 92$$

~~$\frac{x}{y} = \frac{1}{3}$~~

$1y = 3x$

$$1x + 3x = 92$$
$$\frac{4x}{4} = \frac{92}{4}$$
$$x = 23$$
$$y = 3(23)$$
$$y = 69$$

$$\#8) \quad 5(\underline{x+2y}) + 3(\underline{x+2y}) - 2(\underline{x+2y}) = 36$$

$$\frac{\cancel{6} \cdot (x+2y)}{\cancel{6}} = \frac{36}{6}$$

$$x+2y = 6$$

9) a, b

$$\frac{2a}{2} = \frac{5b}{2}$$

$$a = \frac{5b}{2}$$

$$a:b = 5:2 \quad 6a + 10b = 200$$

$$\frac{a}{b} = \frac{5}{2}$$

$$2a = 5b$$

$$\begin{array}{r} \times 3 \quad \times 3 \\ \hline 6a = 15b \end{array}$$

$$15b + 10b = 200$$

$$\frac{25b}{25} = \frac{200}{25}$$

$$\begin{array}{l} b = 8 \\ a = 20 \end{array}$$

$$13) \quad 9(2x-7) - 15(2x-7) + 11(2x-7)$$

Method 1

$$18x - 63 - 30x + 105 + 22x - 77$$

$$10x - 35$$

method 2

$$5(2x-7)$$

$$10x - 35$$

$$\begin{array}{l}
 14) \quad x, y \quad \frac{x}{y} = \frac{3}{5} \quad \text{or} \quad x + y = 52 \\
 \frac{3}{5}y = \frac{5x}{3} \quad \left(\begin{array}{l} \nearrow \\ \searrow \end{array} \right. \quad \begin{array}{l} x + \frac{5}{3}x = 52 \\ \left(\frac{3}{8}\right) \frac{8}{3}x = 52 \left(\frac{3}{8}\right) \end{array} \\
 y = \frac{5}{3}x \quad \left. \begin{array}{l} \\ \\ \end{array} \right) \quad \begin{array}{l} 1x = 19.5 \\ y = 32.5 \end{array}
 \end{array}$$

Savannah O
Samantha

claire ABBI E

Hi
Kiana!

MEGHAN

Twitter

Cardine

Bryce
Liz
AWESOME S

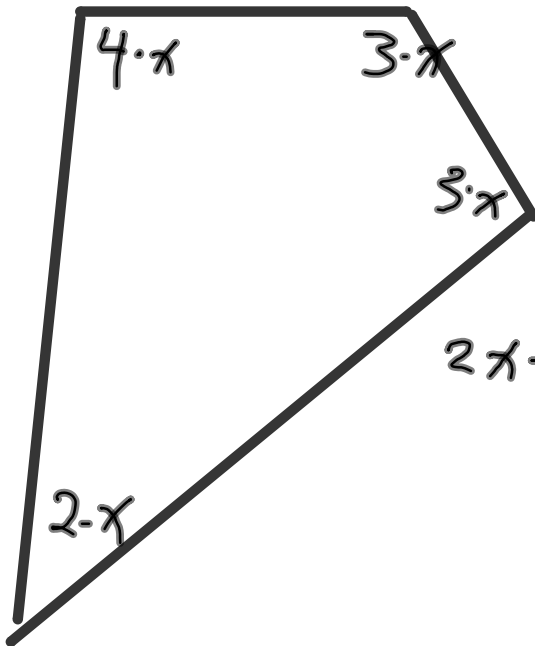
Wilton

is
Awesome

17)

2:3:3:4

angles add up
to 360° in a
quadrilateral



$$2x + 3x + 3x + 4x = 360^\circ$$

$$\vdots$$

18) $\angle x$ & $\angle y$ are complementary
SO

$$\rightarrow x + y = 90$$

AND

$$\rightarrow \frac{x}{y} = \frac{2}{3}$$

Solve for x & y

20)

$$a:b:c = 5:6:7$$

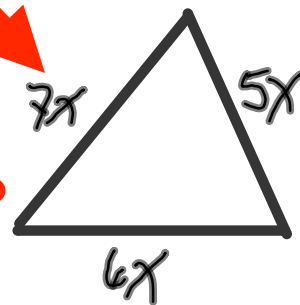
$$7x + 5x + 6x < 135$$

$$\frac{18x}{18} < \frac{135}{18}$$

$$x < 7.5$$

so x must be between
 $0 < 7.5$ or $0 > x > 7.5$

use this fact to decide
 how long the other sides
 are.



23)

$$\frac{\overline{AB}}{\overline{BC}} = \frac{3}{2}$$

$$\overline{AC} = 60$$



- So -

$$3x + 2x = 60$$

$$\frac{5x}{5} = \frac{60}{5}$$

$$x = 12$$

$$\overline{AB} = 12(3) = 36$$

$$\overline{BC} = 12(2) = 24$$