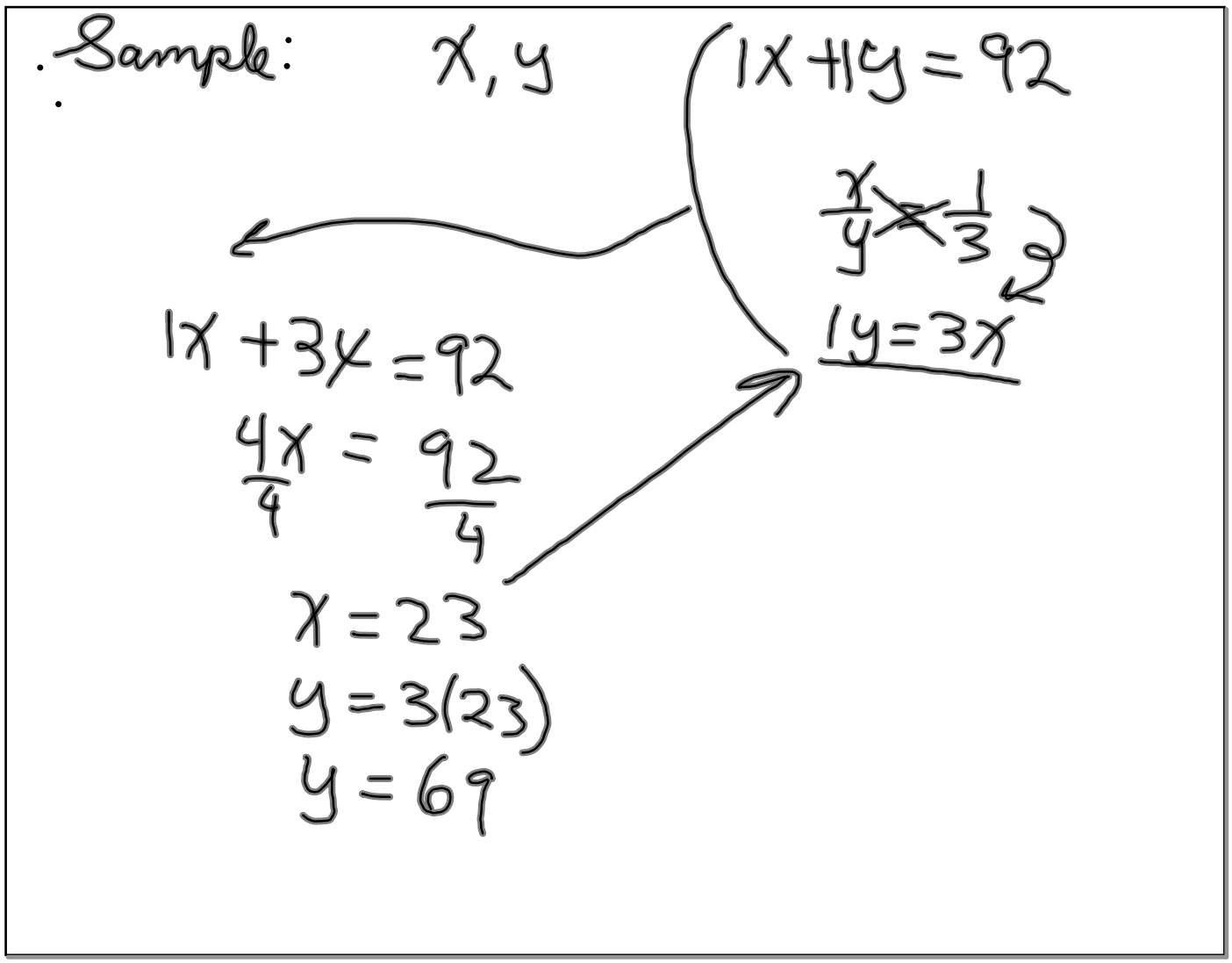
Sample: x, y
1x + 1y = 92
x/y = 1/3
1y = 3x
1x + 3x = 92
4x/4 = 92/4
x = 23
y = 3(23)
y = 69

#8) $5(x+2y)+3(x+2y)-2(x+2y)=36$

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

$$x+2y=6$$

9) a, b

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

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

$a : b = 5 : 2$

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

$2a = 5b$

$\times 3 \quad \times 3$

$6a = 15b$

$6a + 10b = 200$

$15b + 10b = 200$

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

$b = 8$

$a = 20$

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

Method 1

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

$10x - 35$

method 2

$5(2x-7)$

$10x - 35$

14) x, y $\quad \frac{x}{y} = \frac{3}{5}$; $x + y = 52$

$\frac{3}{3}y = \frac{5x}{3}$

$y = \frac{5}{3}x$

$1x + \frac{5}{3}x = 52$

$\left(\frac{3}{8}\right)\frac{8}{3}x = 52\left(\frac{3}{8}\right)$

$1x = 19.5$

$y = 32.5$

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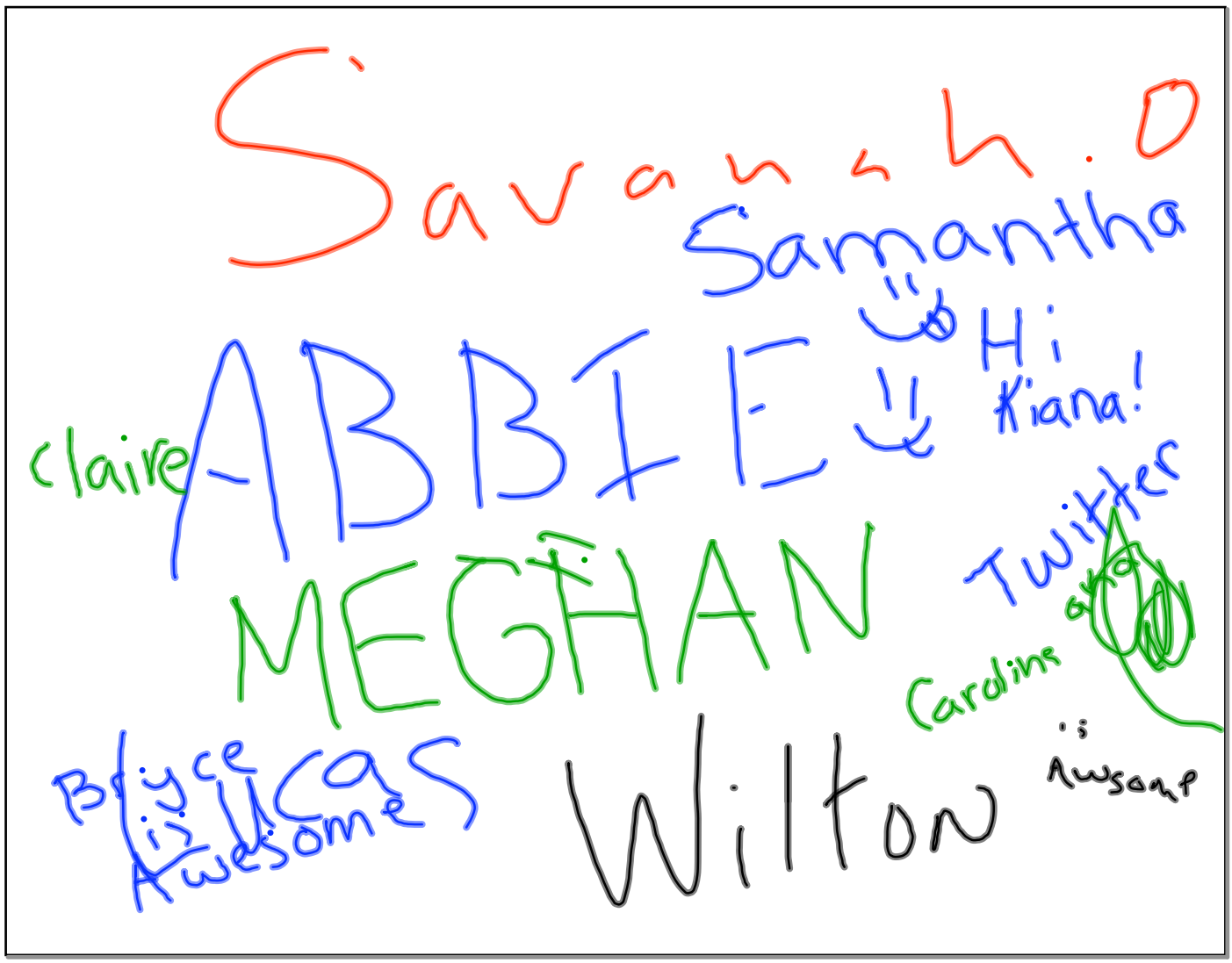
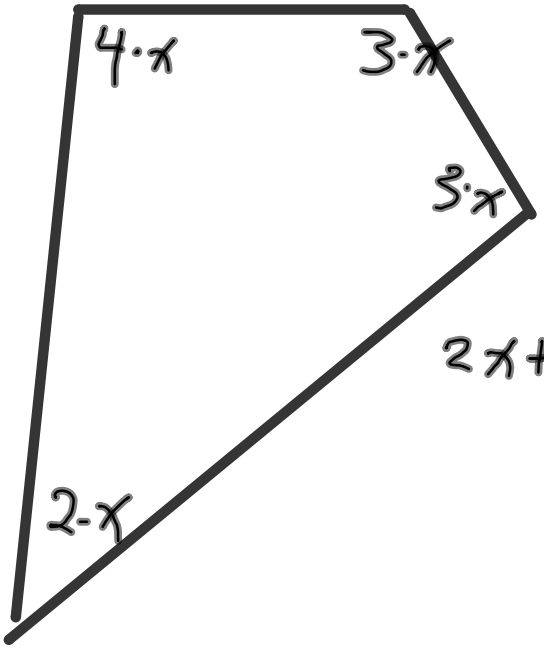


March 03, 2010

17) 2:3:3:4

angles add up to 360° in a quadrilateral



$2x+3x+3x+4x=360^0$

⋮

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

SO

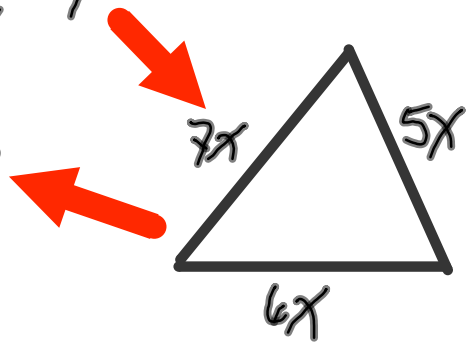
$\rightarrow x + y = 90$

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 -

$3x + 2x = 60$

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

$x = 12$

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

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