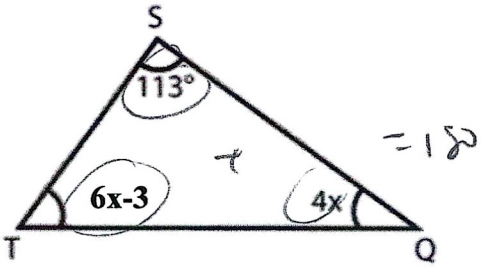
CLUE # 1: Where are they hiding?

1)



$m\angle T + m\angle S + m\angle Q = 180$

$6x-3+4x+113=180$

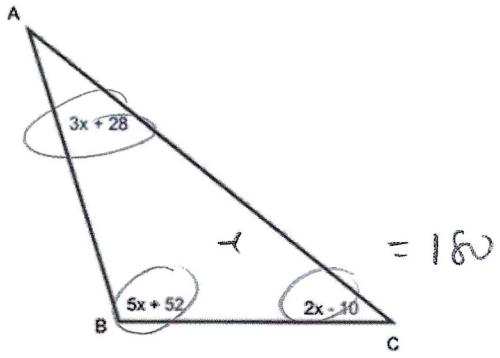
$10x+110=180$

$-110 \quad -110$

$\frac{10x}{10} = \frac{70}{10}$

$x=7$

2)



$m\angle A + m\angle B + m\angle C = 180$

$3x+28+5x+52+2x-10=180$

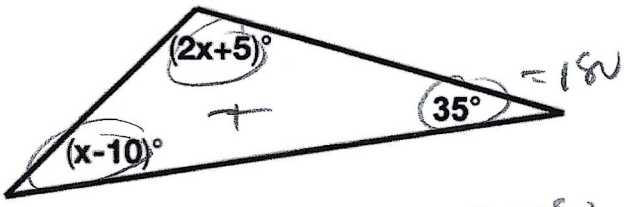
$10x+70=180$

$-70 \quad -70$

$\frac{10x}{10} = \frac{110}{10}$

$x=11$

3)



$m\angle + m\angle + m\angle = 180$

$x-10+2x+5+35=180$

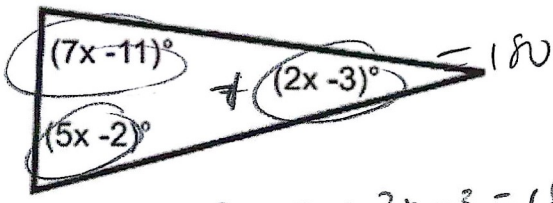
$3x+30=180$

$-30 \quad -30$

$\frac{3x}{3} = \frac{150}{3}$

$x=50$

4)



$m\angle + m\angle + m\angle = 180$

$7x-11+5x-2+2x-3=180$

$14x-16=180$

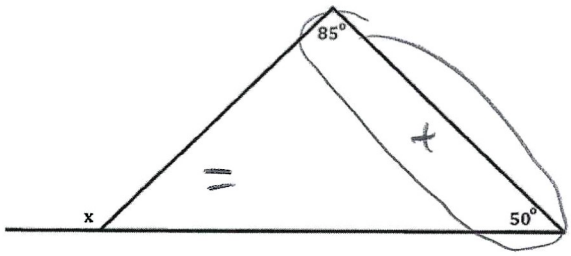
$+16 \quad +16$

$\frac{14x}{14} = \frac{196}{14}$

$x=14$

CLUE # 2 Who is solving all of the problems?

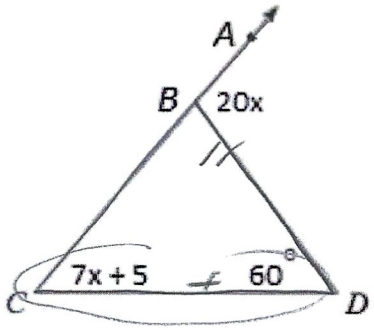
1)



$85 + 50 = x$

$135 = x$

2)



$7x + 5 + 60 = 20x$

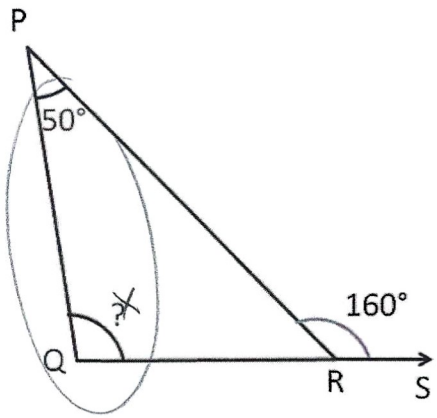
$7x + 65 = 20x$

$-7x \quad -7x$

$\frac{65}{13} = \frac{13x}{13}$

$x = 5$

3)

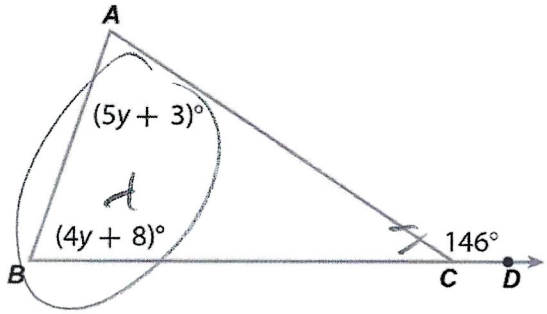


$50 + x = 160$

$-50 \quad -50$

$x = 110$

4)



$5y + 3 + 4y + 8 = 146$

$9y + 11 = 146$

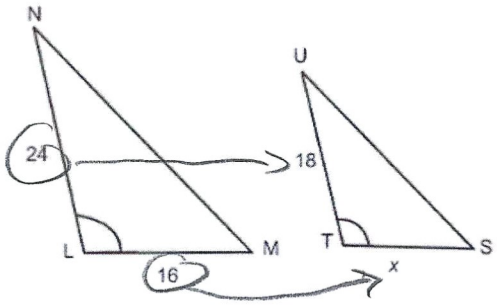
$-11 \quad -11$

$\frac{9y}{9} = \frac{135}{9}$

$y = 15$

CLUE #3 What are they solving these problems with?

1)

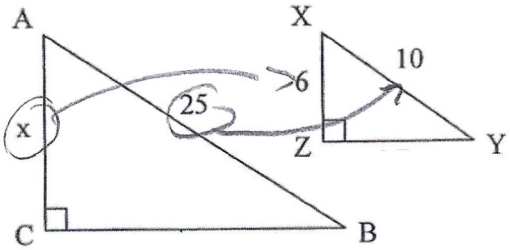


$\frac{24}{18} = \frac{16}{x}$

$\frac{24x}{24} = \frac{288}{24}$

$x = 12$

2)

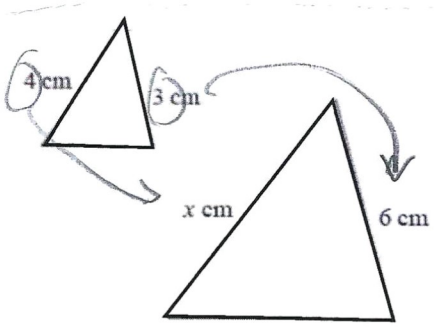


$\frac{x}{6} = \frac{25}{10}$

$\frac{10x}{10} = \frac{150}{10}$

$x = 15$

3)

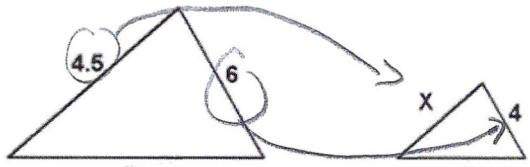


$\frac{4}{x} = \frac{3}{6}$

$\frac{3x}{3} = \frac{24}{3}$

$x = 8$

4)



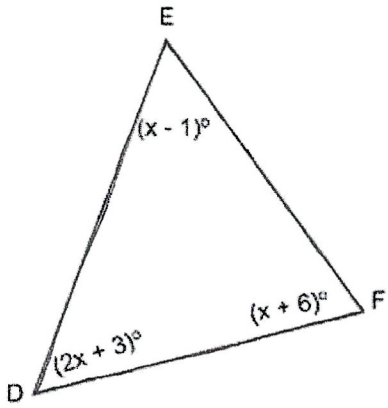
$\frac{4.5}{x} = \frac{6}{4}$

$\frac{6x}{6} = \frac{18}{6}$

$x = 3$

Ticket Questions:

1) If x = 43 solve for the $m\angle D$



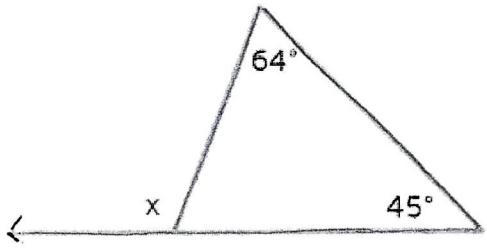
$m\angle D = 2(x) + 3$

$m\angle D = 2(43) + 3$

$m\angle D = 86 + 3$

$m\angle D = 89°$

2) Tommy solved the following question below. Did Tommy solve it correctly? If not, what did he do wrong and what is the correct answer?



Tommy did not solve it correctly. He added the 64 and 45 and x to get 180. He was supposed to only add 64 and 45 to equal the exterior angle x.

$64 + 45 + x = 180$

$109 + x = 180$

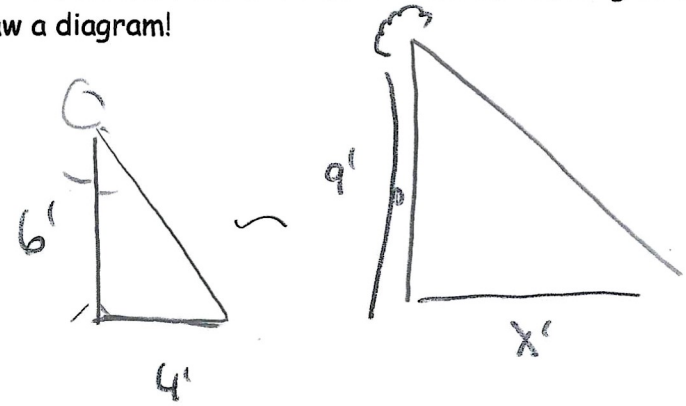
$-109 \quad -109$

$x = 71$

$64 + 45 = x$

$109 = x$

3) A 6-foot man casts a 4-foot shadow, how long of a shadow would a 9- foot tree have? Make sure to draw a diagram!



$\frac{6}{4} = \frac{9}{x}$

$\frac{6x}{6} = \frac{36}{6}$

$x = 6$

6 ft long shadow