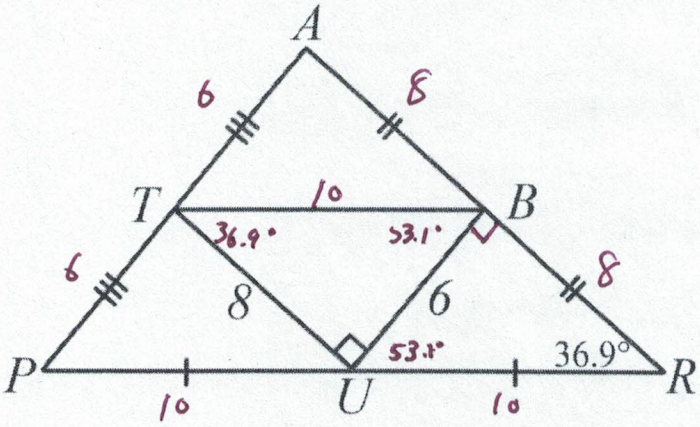
Chapter 8 Review

Name: KEY

Period: ____

1.) Given the diagram below, find the following:



(a) The length of $\overline{AR}$

$8+8=16$

AR = 16

(b) The length of $\overline{TB}$

$6^2+8^2=TB^2$

$36+64=TB^2$

TB = 10

(c) $m\angle TBU$

$\triangle TBU \cong \triangle RUB$

$180-90-36.9=53.1$

$m\angle TBU = 53.1°$

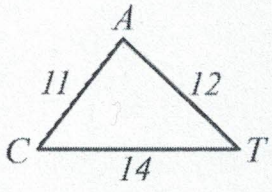
(d) perimeter of ΔPAR

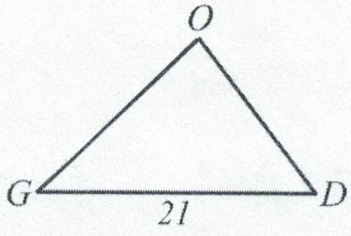
$P = 6+8+10+6+8+10$

$12 \quad 16 \quad 20$

P = 48

2.) If $\triangle CAT \sim \triangle DOG$, find:



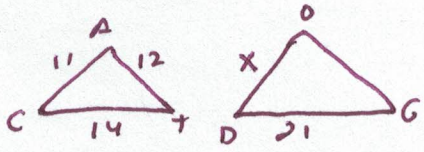


(a) The ratio of the perimeters of $\triangle CAT$ to $\triangle DOG$.

14:21 or 2:3

(b) The length of $\overline{AT}$.

REDRAW!!



$\frac{11}{x} = \frac{14}{21}$

$14x = 231$

$x = \frac{231}{14}$

$DO = \frac{231}{14}$ or 16.5

THIS IS WRONG!!

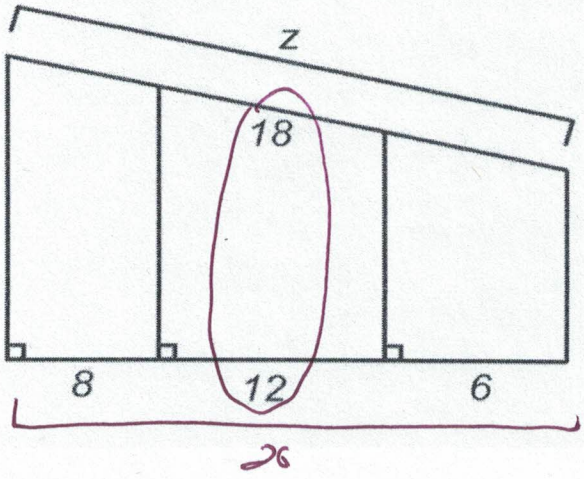
$\frac{12}{x} = \frac{14}{21}$

$14x = 252$

$x = 18$

No! X

3.) Find the value of z.

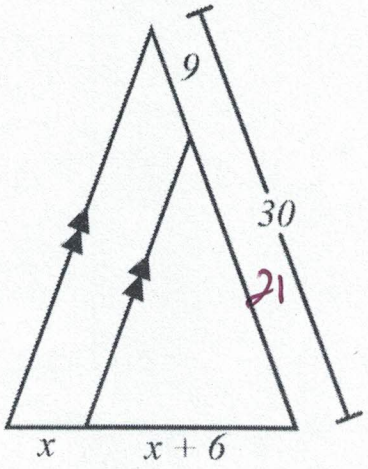


$\frac{z}{26} = \frac{18}{12}$

$12z = 468$

z = 39

4.) Find the value of x.



METHOD 1

$\frac{9}{x} = \frac{21}{x+6}$

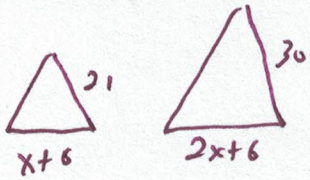
$9(x+6) = 21x$

$9x + 54 = 21x$

$54 = 12x$

$x = 4.5$

METHOD 2



$\frac{21}{30} = \frac{x+6}{2x+6}$

$21(2x+6) = 30(x+6)$

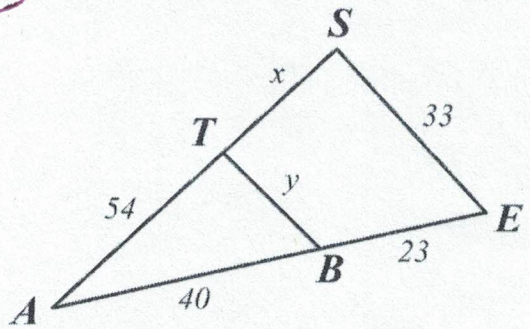
$42x + 126 = 30x + 180$

$12x = 54$

$x = 4.5$

5.) Given: $\triangle SEA \sim \triangle TBA$.

Find the values of x and y. Round your answers to the nearest hundreth.



$\frac{54}{40} = \frac{x}{23}$

$40x = 1242$

$x = 31.05$

OR

$\frac{54}{40} = \frac{x+54}{63}$

$40x + 2160 = 3402$

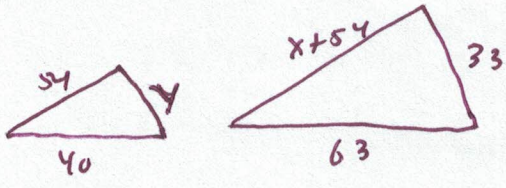
$40x = 1242$

$\frac{y}{33} = \frac{40}{63}$

$63y = 1320$

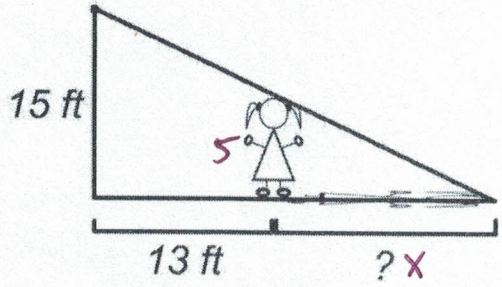
$y = 20.95238\ldots$

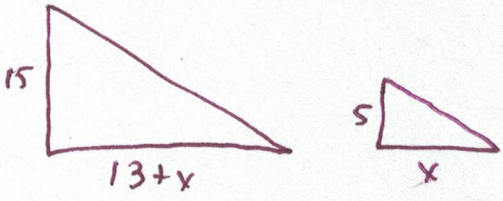
$y = 20.95$



6.) A 5-foot-tall girl is standing 13 feet away from a 15-foot-tall lamppost. How long is her shadow?

Note: Diagram not necessarily drawn to scale.





THIS IS WRONG!!

$\frac{15}{13} = \frac{5}{x}$

$15x = 65$

$x = 4.\overline{3}$

NOT x

$\frac{15}{5} = \frac{13+x}{x}$ OR $\frac{15}{13+x} = \frac{5}{x}$

$15x = 5(13+x)$

$15x = 65 + 5x$

$10x = 65$

$x = 6.5$ ft