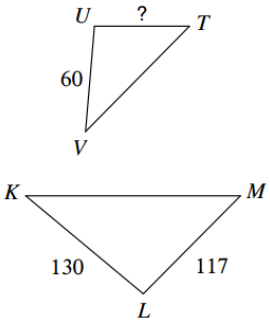
Name: _____ Period: _____

Checkpoint 6C *Integrated Math 2*

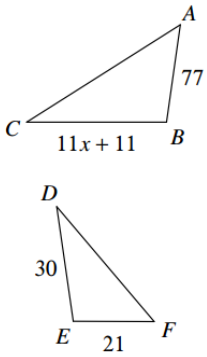
Answer the questions thoroughly including any necessary math or explanations.

Each pair of given triangles are similar. Determine the missing length. Show your work.

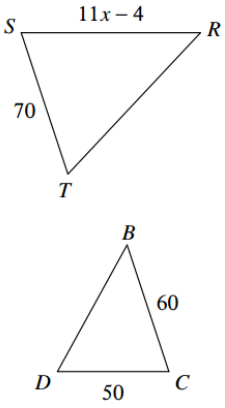
1) $\Delta TUV \sim \Delta MLK$



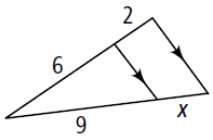
2) $\Delta ABC \sim \Delta FED$



3) $\Delta RST \sim \Delta BCD$



4)



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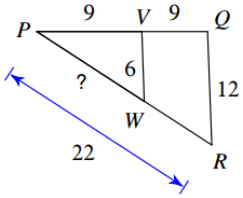
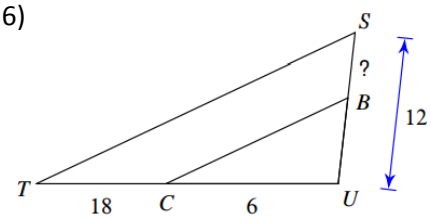


6)



Use the diagram to fill in the proportions.

7) $\frac{a}{c} = \frac{\square}{f}$

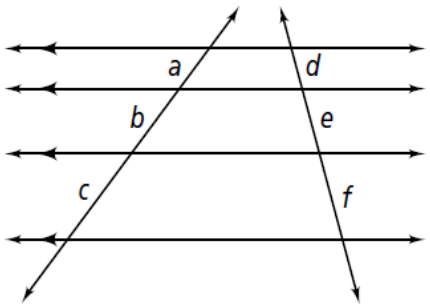
8) $\frac{f}{e} = \frac{c}{\square}$

9) $\frac{\square}{c} = \frac{e}{f}$

10) $\frac{a}{\square} = \frac{b}{e}$

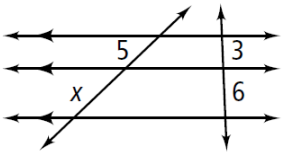
11) $\frac{a}{b} = \frac{\square}{e}$

12) $\frac{e}{\square} = \frac{f}{c}$

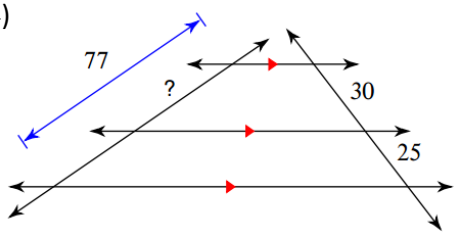


Solve for the missing side.

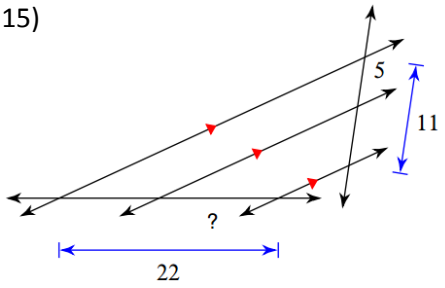
13)



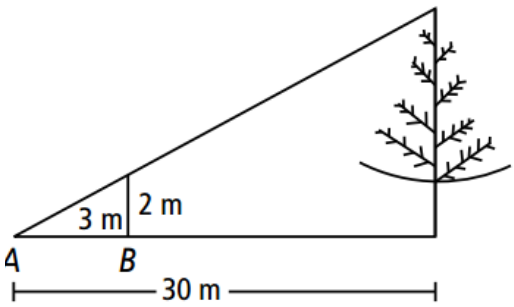
14)



15)



16) A stick 2 m long is placed vertically at point B. The top of the stick is in line with the top of a tree as seen from point A, which is 3 m from the stick and 30 m from the tree. How tall is the tree?



17) Stephanie casts a shadow of 1.2 m and she is 1.8 m tall. A wind turbine casts a shadow of 10 m at the same time that Stephanie measured her shadow. Draw a diagram of this situation and then calculate the height of the wind turbine.

18) A 1.6-m-tall woman stands next to the Eiffel Tower. At this time of day, her shadow is 0.5 m long. At the same time, the tower's shadow is 93.75 m long. Draw a diagram of this situation and then calculate the height of the Eiffel Tower.