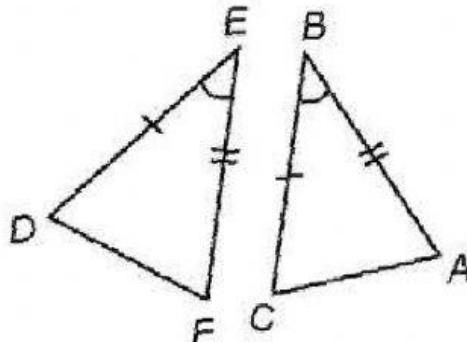


Instructions: Read the questions carefully and check the box of your answer.

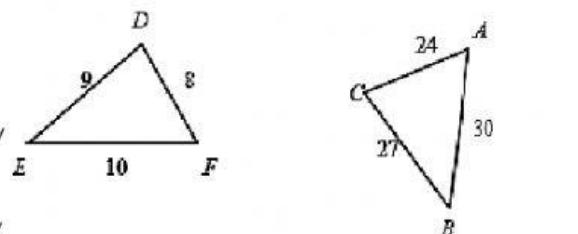
1. Are the two triangles on the right similar? And why?

- No; the sides are not congruent.
- Yes; $\triangle EDF \sim \triangle ABC$ by SSS Similarity
- Yes; $\triangle EDF \sim \triangle ABC$ by ASA Similarity
- Yes; $\triangle EDF \sim \triangle ABC$ by SAS Similarity



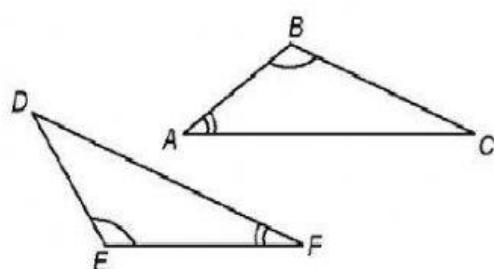
2. Are the two triangles on the right similar? And why?

- No; sides are not proportional.
- Yes; $\triangle EDF \sim \triangle BAC$ by SSS Similarity
- Yes; $\triangle EDF \sim \triangle ABC$ by SSS Similarity
- Yes; $\triangle EDF \sim \triangle ABC$ by SSS Similarity



3. Are the two triangles on the right similar? And why?

- Yes; $\triangle EDF \sim \triangle ABC$ by AA Similarity
- Yes; $\triangle EDF \sim \triangle ABC$ by AA Similarity
- Yes; $\triangle EDF \sim \triangle ABC$ by ASA Similarity
- No; there is not enough information to determine similarity.



4. If $\frac{a}{b} = \frac{5}{3}$, then $3a = \underline{\hspace{2cm}}$

3b

10b

5b

6b

5. Given: $\frac{6}{a} = \frac{18}{27}$, what is a ?

54

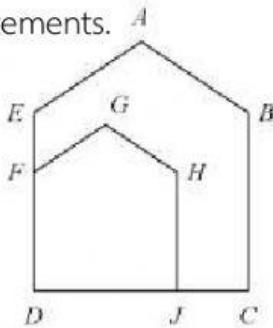
81

9

18

6. $ABCDE \sim GHJDF$. Complete the statements.

a. $\angle H \cong \underline{\hspace{2cm}}$



b. $\frac{GH}{DJ} = \frac{AB}{\underline{\hspace{2cm}}}$

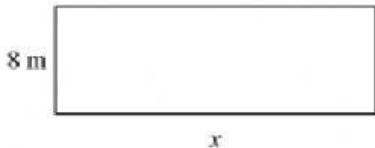
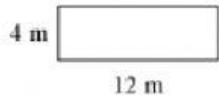
$\angle B; DC$

$E; AE$

$E; DC$

$\angle B; AE$

7. The two rectangles are similar. Which is a correct proportion for corresponding sides?



$\frac{12}{8} = \frac{x}{4}$

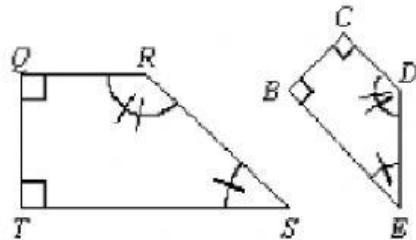
$\frac{12}{4} = \frac{x}{8}$

$\frac{12}{4} = \frac{x}{20}$

$\frac{4}{12} = \frac{x}{8}$

8. Figure $TQRS \sim BCDE$. Name a pair of corresponding sides?

- \overline{TQ} and \overline{BE}
- \overline{TS} and \overline{CD}
- \overline{RS} and \overline{BC}
- \overline{QR} and \overline{CD}

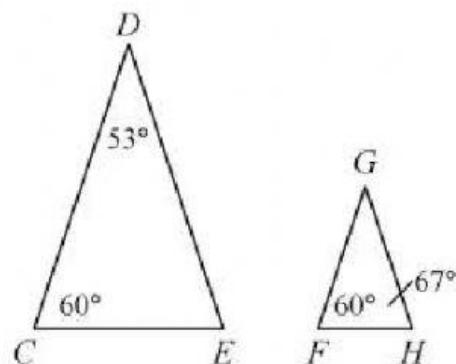


9. State if the two triangles below are similar or not.

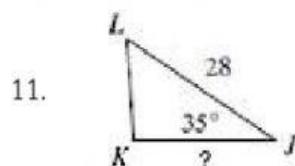
- $\Delta ABC \sim \Delta MNO$; SSS
- $\Delta ABC \sim \Delta MNO$; AA
- $\Delta ABC \sim \Delta MNO$; SAS
- The triangles are not similar.

10. Write a similarity statement for the triangles.

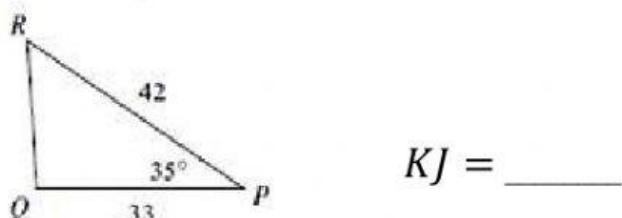
- $\Delta CDE \sim \Delta FGH$
- $\Delta CDE \sim \Delta FGH$
- $\Delta CED \sim \Delta FGH$
- $\Delta EDC \sim \Delta FGH$



Items 11 – 15 . Show your solutions inside the box. (2 pts. each)

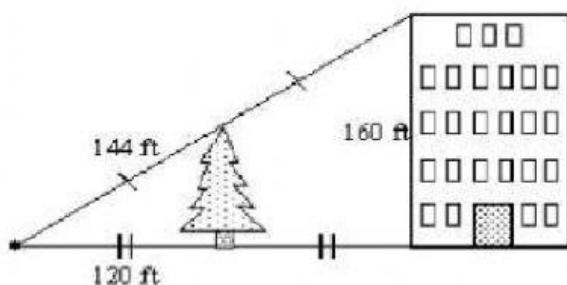


Given the figure on the left, how long is KJ ?



$$KJ = \underline{\hspace{2cm}}$$

12. Use the information in the diagram to determine the height of the tree to the nearest foot.



\therefore the height of the tree is $\underline{\hspace{2cm}}$ ft.

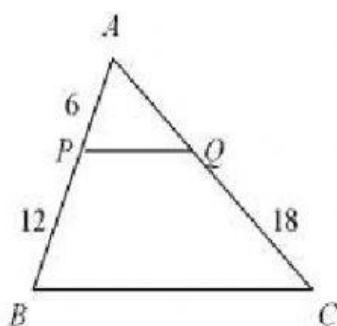
13. A building 50 ft high casts a 75-ft shadow. Sarah casts a 6-ft shadow. The triangle formed by the building and its shadow is similar to the triangle formed by Sarah and her shadow. How tall is Sarah?

\therefore Sarah is $\underline{\hspace{2cm}}$ ft tall.

14. A tree is standing next to a 40-foot high building. The tree has an 18-foot shadow, while the building has a 16-foot shadow. How tall is the tree, rounded to the nearest foot?

\therefore A tree is _____ ft tall.

15. Given: PQ is parallel to BC . Find the length of AQ . The diagram is not drawn to scale.



$\therefore AQ$ is _____ units.

