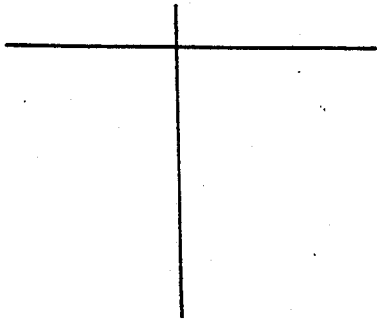
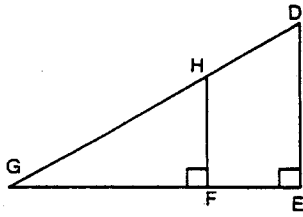


Geometry - Similar Figures

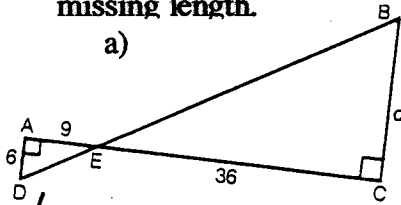
Name \_\_\_\_\_

1. Prove:  $\triangle GHF \sim \triangle GDE$



2. The figures below are similar. Use the ratio between corresponding sides to write a proportion and find the missing length.

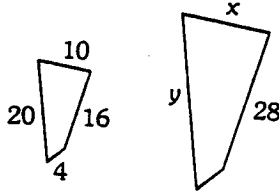
a)



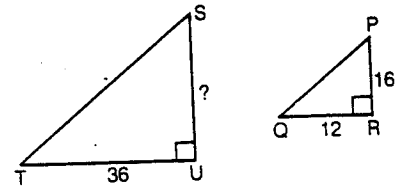
$$\frac{d}{6} = \frac{36}{9}$$

$$\underline{d=24}$$

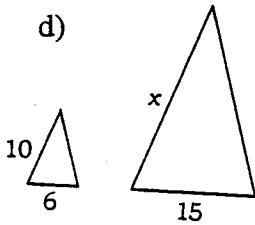
b)



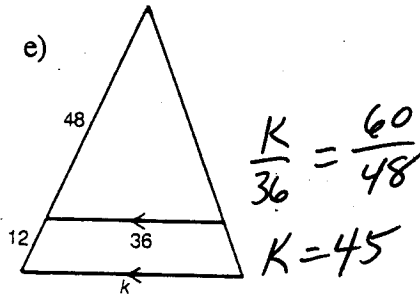
c)  $\triangle STU \sim \triangle PQR$



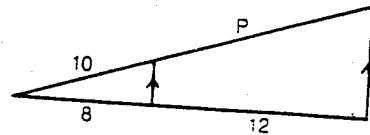
d)



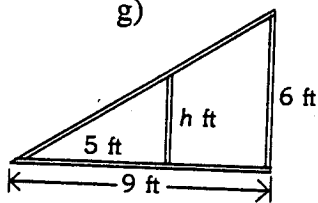
e)



f)



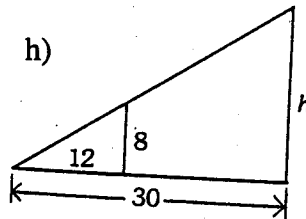
g)



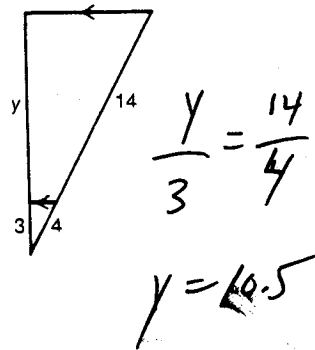
$$\frac{h}{5} = \frac{6}{9}$$

$$\underline{h=3.3}$$

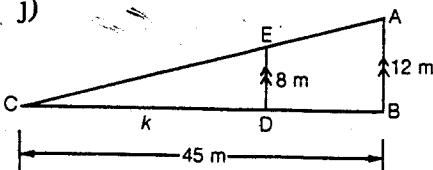
h)



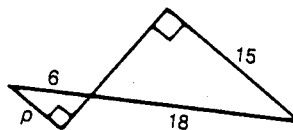
i)



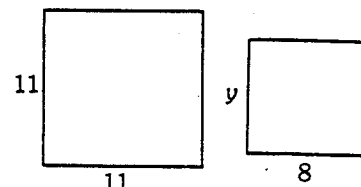
j)



k)



l)



$$\underline{y=8}$$

3. Find the missing parts.

(a) If  $\triangle ABC \sim \triangle DEF$  then

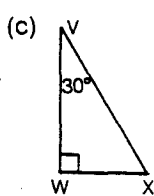
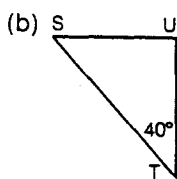
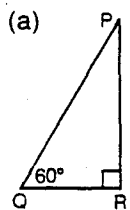
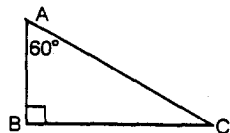
- ▶ side AB is proportional to side \_\_\_\_\_
- ▶ side BC is proportional to side \_\_\_\_\_
- ▶ side AC is proportional to side \_\_\_\_\_

(b) If  $\triangle LMN \sim \triangle PQR$  then

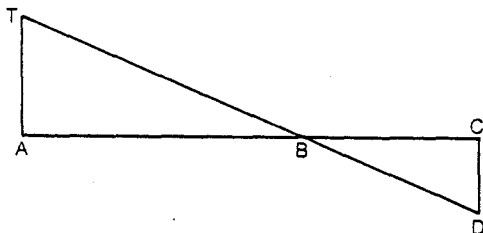
$\angle L = \underline{\hspace{1cm}} \angle M = \underline{\hspace{1cm}} \angle R = \underline{\hspace{1cm}}$

5. Which triangles are similar to  $\triangle ABC$ ?

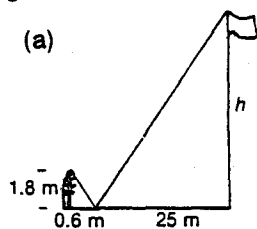
Give reasons for your answer.



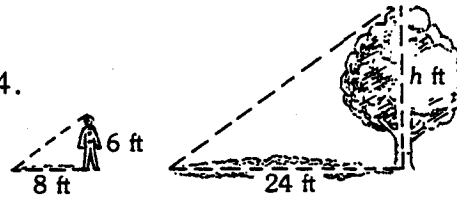
7. In the diagram  $TA \perp AB$ ,  $CD \perp BC$ ,  $CD = 6.2$  cm,  $BC = 9.6$  cm,  $AB = 18.5$  cm. Find  $TA$ .



9. Use the data in each diagram. Calculate the height,  $h$ .

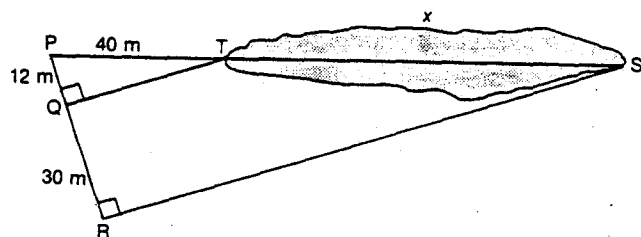


4.



A tree's shadow is 24 feet long. The 6-foot-tall owner has a shadow 8 feet long. How tall is the tree?

6. To calculate the length of a lake, the following measurements were made. How long is the lake?



8. To find the width,  $DC$ , of a river, the following measurements were made.

What is the width of the river?

