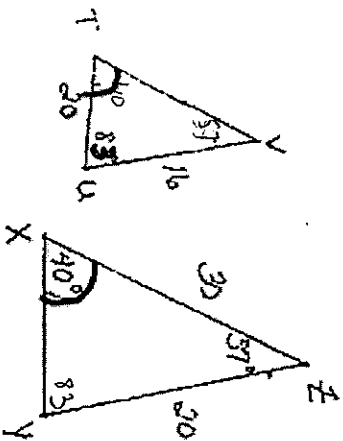


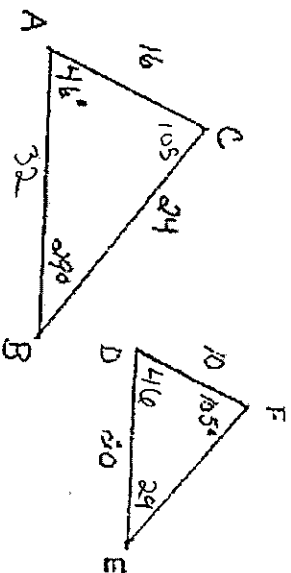
Find all the missing measurements:

1.  $\triangle UVW \sim \triangle XYZ$



$$\begin{aligned} TV &= \underline{24} & \frac{16}{20} &= \frac{TV}{30} \\ XY &= \underline{25} & \frac{16}{20} &= \frac{20}{XY} \\ m\angle V &= \underline{57} & m\angle T &= \underline{40} \\ m\angle Y &= \underline{83} & m\angle Y &= \underline{83} \end{aligned}$$

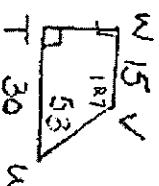
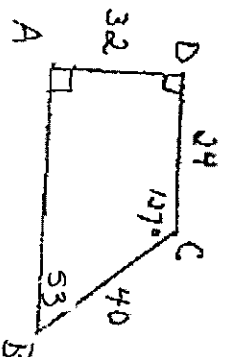
2.  $\triangle ABC \sim \triangle DEF$



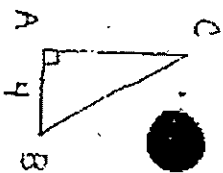
$$\begin{aligned} AB &= \underline{32} & \frac{16}{10} &= \frac{AB}{20} \\ FE &= \underline{15} & \frac{16}{10} &= \frac{24}{FE} \\ m\angle C &= \underline{105} & m\angle D &= \underline{46} \\ m\angle E &= \underline{29} & m\angle E &= \underline{29} \end{aligned}$$

3.  $ABCD \sim TUVW$

$$\begin{aligned} AB &= \underline{48} & \frac{24}{15} &= \frac{AB}{30} \\ WT &= \underline{20} & \frac{24}{15} &= \frac{32}{WT} \\ VU &= \underline{25} & \frac{24}{15} &= \frac{40}{VU} \\ m\angle A &= \underline{90} & m\angle B &= \underline{53} \\ m\angle W &= \underline{90} & m\angle V &= \underline{127} \end{aligned}$$



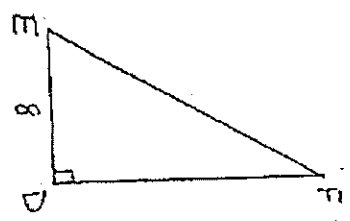
State the postulate or theorem that allows you to conclude that  $\triangle ABC \sim \triangle DEF$ . If they are not similar, state none.



4.  $\frac{AC}{DF} = \frac{1}{2}$  SAS 7.  $AC = 5, DF = 10$  SAS

5.  $\frac{BC}{EF} = \frac{1}{2}$  NOPE 8.  $\angle B \cong \angle E$  AA

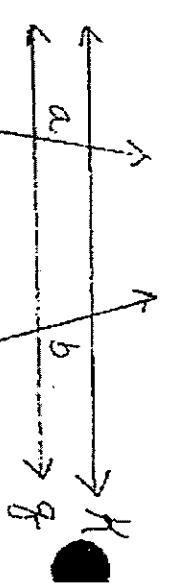
6.  $\frac{AC}{DF} = \frac{3}{5}$  NOPE 9.  $BC = 12, EF = 6$  NOPE



For examples, #10 - 13, refer to the diagram.

10.  $a = 3, b = 2, c = 6, d =$  4  $\frac{3}{6} = \frac{2}{4}$

$k \parallel g \parallel j$



11.  $b = 3, c = 12, d = 9, a =$  4  $\frac{3}{9} = \frac{a}{12}$

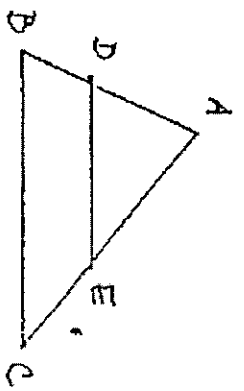
12.  $c = 6\frac{2}{3}, d = 5, b = 3, a =$  4  $\frac{3}{6} = \frac{a}{7\frac{2}{3}}$

13.  $b = 2, a = 3, c = 7\frac{1}{2}, d =$  5  $\frac{2}{7} = \frac{3}{7\frac{1}{2}}$

For examples #14 - 16, given  $\overline{DE} \parallel \overline{BC}$ , find each measurement.

14.  $AD = 2, DB = 4, AE = 5, EC =$  10  
 $\frac{2}{4} = \frac{5}{EC}$

15.  $DB = 6, EC = 8, AE = 5, AD =$  3.75  
 $\frac{AD}{6} = \frac{5}{8}$



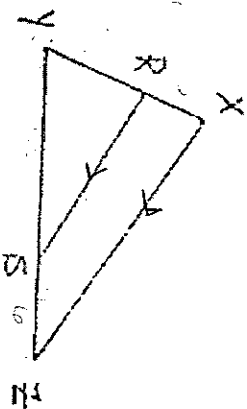
16.  $AE = 5, AD = 4, EC = 7, AB =$  9.6  
 $\frac{4}{AB} = \frac{5}{5+7}$

For examples #17 - 19, given  $\overline{RS} \parallel \overline{XZ}$ , find each measurement.

17.  $XR = 4$ ,  $RY = 6$ ,  $YS = 8$ ,  $SZ = \underline{5\sqrt{3}}$   
 $\frac{4}{6} = \frac{SZ}{8}$

18.  $YX = 12$ ,  $YZ = 16$ ,  $SZ = 4$ ,  $YR = \underline{9}$   
 $\frac{12}{16} = \frac{YR}{12}$

19.  $XR = 5$ ,  $YS = 10$ ,  $SZ = 6$ ,  $XY = \underline{13\sqrt{3}}$   
 $\frac{5}{10} = \frac{6}{XY}$

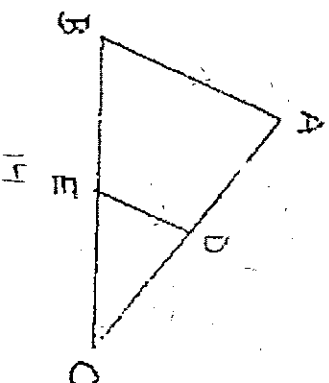


For examples #20 - 22, using the given conditions, will  $\overline{DF}$  be parallel to  $\overline{AB}$ ?

20.  $AC = 10$ ,  $CD = 4$ ,  $EC = 2$ ,  $BC = 5$  yes  
 $\frac{2}{6} = \frac{4}{10}$

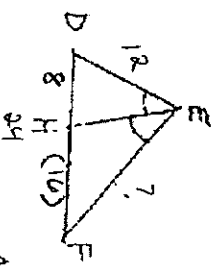
21.  $AC = 12$ ,  $AD = 8$ ,  $EC = 3$ ,  $BC = 9$  yes  
 $\frac{4}{12} = \frac{3}{9}$

22.  $BC = 6$ ,  $BC = 14$ ,  $AD = 12$ ,  $DC = 8$  no  
 $\frac{8}{20} \neq \frac{6}{14}$

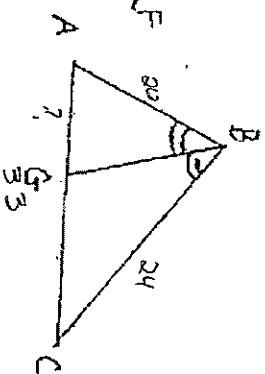


For examples #23 - 24,  $\triangle ABC \sim \triangle DEF$ ,  $\overline{BG}$  bisects  $\angle ABC$ ,  $\overline{EH}$  bisects  $\angle DEF$

23.  $AB = 20$ ,  $BC = 24$ ,  $AC = 33$ ,  $AG = \underline{15}$   
 $\frac{AG}{33} = \frac{20}{44}$  or  $\frac{20}{33} = \frac{24}{44}$



24.  $DH = 8$ ,  $DF = 24$ ,  $DE = 12$ ,  $EF = \underline{24}$   
 $\frac{12}{8} = \frac{EF}{10}$

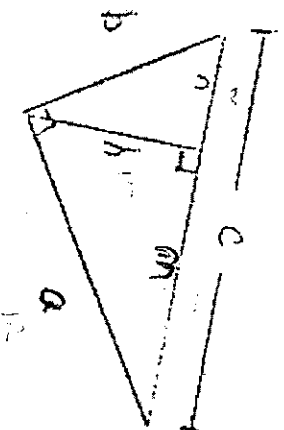


For examples # 25 - 26, refer to the diagram and find each measure.

25.  $a = 12$ ,  $m = 6$ ,  $c = \underline{24}$   
 $\frac{12}{c} = \frac{6}{12}$

26.  $m = 4$ ,  $h = 10$ ,  $c = \underline{25}$   
 $\frac{4}{10} = \frac{10}{c}$

27.  $c = 26$ ,  $n = 8$ ,  $h = \underline{12}$   
 $\frac{8}{h} = \frac{h}{18}$   
 $h^2 = 144$



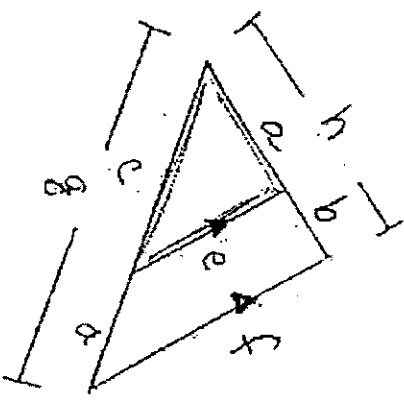
For examples #28 - 31, refer to the diagram and state whether the proportion is correct.

28.  $\frac{a}{b} = \frac{d}{c}$  NO

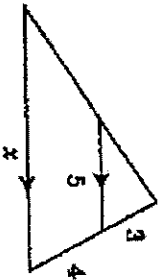
30.  $\frac{b}{h} = \frac{e}{f}$  NO

29.  $\frac{c}{g} = \frac{a}{h}$  YES

31.  $\frac{c}{e} = \frac{g}{f}$  YES



32. Find x:



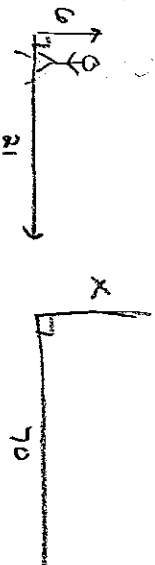
$x = \frac{11.6}{5} = 2.32$

33. Find x:



$x = \frac{15}{12} = 1.25$  OR  $\frac{12}{15} = \frac{x}{20}$

34. A man 6 ft tall casts a 21 ft shadow at the same time a tree casts a 70 ft shadow. How tall is the tree?

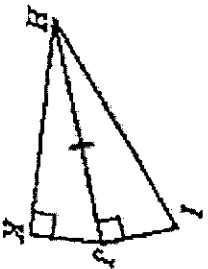


$\frac{6}{x} = \frac{21}{70}$

20 ft.

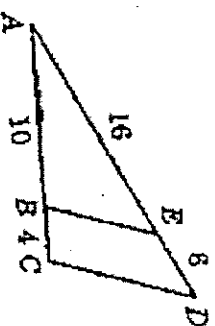
For examples #35 - 36, state the postulate or theorem (or none) that proves the similarity of the two triangles. Write the similarity statement.

35.



none

36.



$\frac{16}{22} \neq \frac{10}{14}$

none