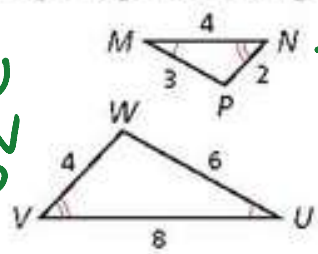
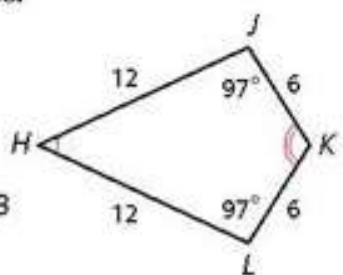
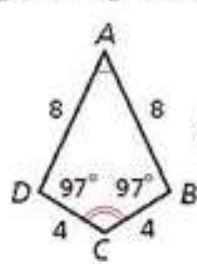


Identify the pairs of congruent angles and corresponding sides.

②  
 $\angle M \cong \angle U$   
 $\angle V \cong \angle N$   
 $\angle W \cong \angle P$



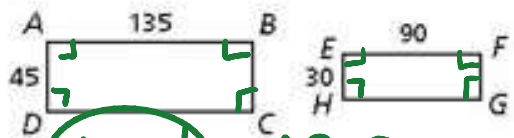
3.  
 $\frac{MN}{UV} = \frac{NP}{VW} = \frac{PM}{WU} = \frac{1}{2}$



**Multi-Step** Determine whether the polygons are similar. If so, write the similarity ratio and a similarity statement.

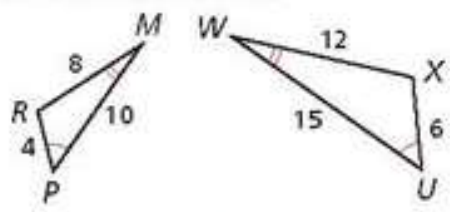
$\frac{45}{30} = \frac{3}{2}$   
 $\frac{135}{90} = \frac{3}{2}$

4. rectangles *ABCD* and *EFGH*



Yes!  $ABCD \sim EFGH$

5.  $\triangle RMP$  and  $\triangle UWX$



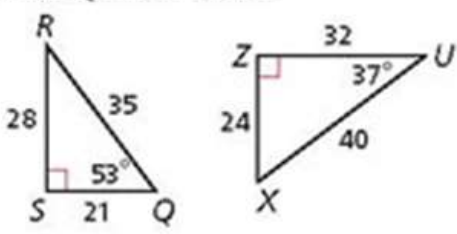
$\frac{58}{73} = \frac{24}{x}$   
 $58x = 1752$   
 $x = 30.21$   
**30ft**



6. **Art** The town of Goodland, Kansas, claims that it has one of the world's largest easels. It holds an enlargement of a van Gogh painting that is 24 ft wide. The original painting is 58 cm wide and 73 cm tall. If the reproduction is similar to the original, what is the height of the reproduction to the nearest foot?

**Multi-Step** Determine whether the polygons are similar. If so, write the similarity ratio and a similarity statement.

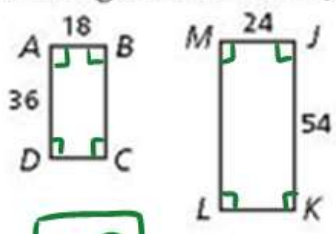
9.  $\triangle RSQ$  and  $\triangle UXZ$



$\frac{18}{24} = \frac{3}{4}$   
 $\frac{36}{54} = \frac{2}{3}$

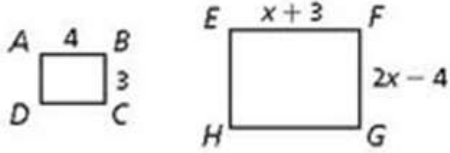
**no**

10. rectangles *ABCD* and *JKLM*



Find the value of  $x$ .

19.  $ABCD \sim EFGH$



$$\frac{4}{x+3} = \frac{3}{2x-4}$$

$$4(2x-4) = 3(x+3)$$

$$8x - 16 = 3x + 9$$

$$5x = 25$$

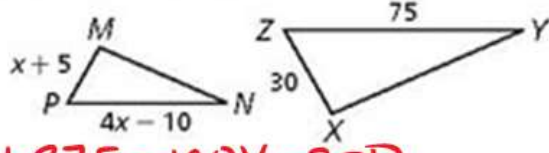
$$x = 5$$

$$\frac{MP}{XZ} = \frac{NP}{YZ}$$

Always

$$\frac{x+5}{30} = \frac{4x-10}{75}$$

20.  $\triangle MNP \sim \triangle XYZ$



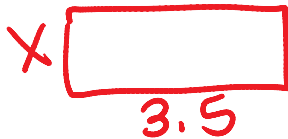
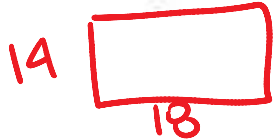
$$75x + 375 = 120x - 300$$

$$\frac{675}{45} = \frac{45x}{45} \quad x = 15$$

24. A dining room is 18 ft long and 14 ft wide. On a blueprint for the house, the dining room is 3.5 in. long. To the nearest tenth of an inch, what is the width of the dining room on the blueprint?

$$18x = 49$$

$$x = 2.7 \text{ in}$$



$$\frac{18 \text{ long}}{14 \text{ wide}} = \frac{3.5 \text{ long}}{x \text{ wide}}$$