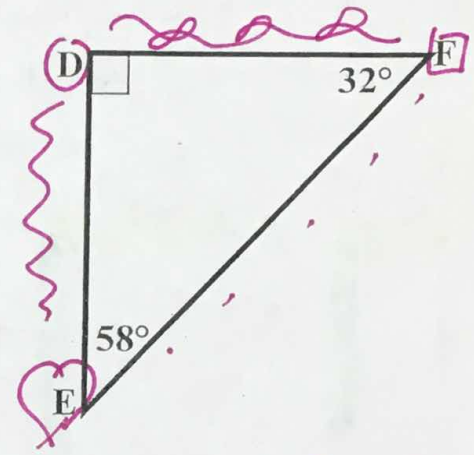
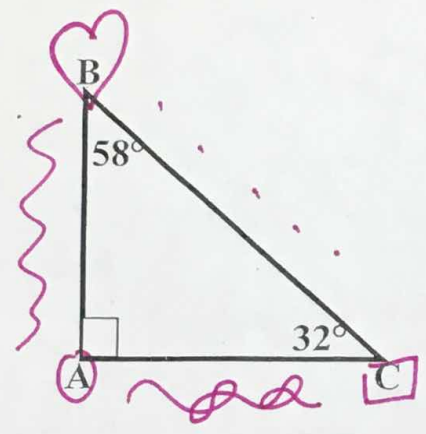


KEY

# Similarity

- \* Figures that have the same shape are **Similar** but different size
- \* **Triangle ABC is similar to Triangle DEF.**



- \* The corresponding angles of similar figures are **congruent**
- \* The corresponding sides of similar figures are **proportional**

### Corresponding Angles

### Corresponding Sides

$$\begin{aligned} \angle A &\cong \angle D \\ \angle B &\cong \angle E \\ \angle C &\cong \angle F \end{aligned}$$

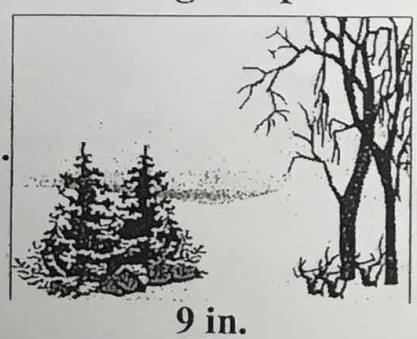
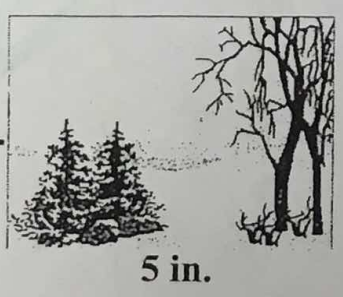
$$\begin{aligned} AB &\sim ED \\ BC &\sim EF \\ AC &\sim DF \end{aligned}$$

Kasie would like to make a copy of a picture that measures 3 in. by 5 in. She wants to enlarge it to 6 in. by 9 in. Will the enlarged picture be an exact replica of the original picture?

$$\frac{3}{5} = \frac{6}{9}$$

$$5 \cdot 6 \stackrel{?}{=} 3 \cdot 9$$

$$30 \stackrel{?}{=} 27$$



No! Enlarged picture will not be an exact replica.

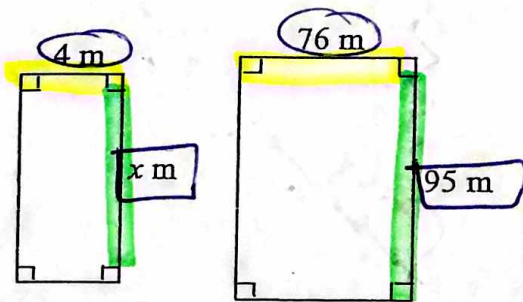
Name KEY

## Solve For The Sides/Measure

Solve for the missing sides in each pair of similar figures. For each pair of similar figures, give the measure of the corresponding angles.

- Corresponding angles are Congruent.
- Corresponding sides are proportional.

1.

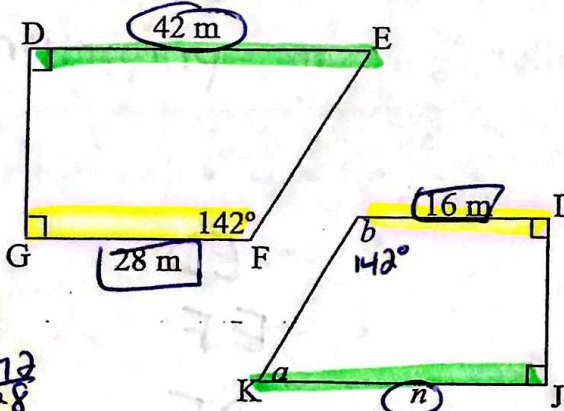


$$\frac{4}{76} = \frac{x}{95}$$

$$76x = \frac{380}{76}$$

$$x = 5 \text{ m}$$

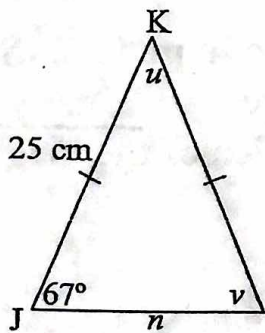
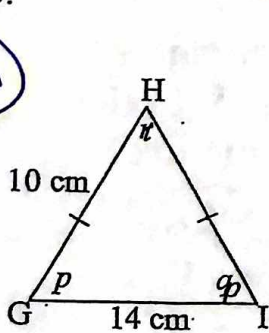
3.



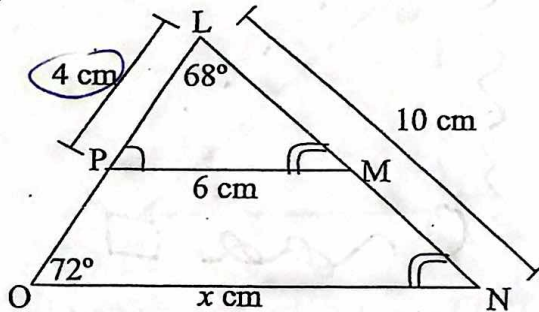
$$\frac{42}{n} = \frac{28}{16}$$

$$28n = \frac{672}{28}$$

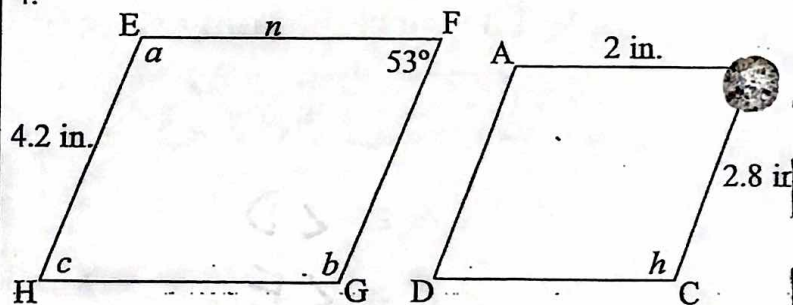
$$n = 24 \text{ m}$$



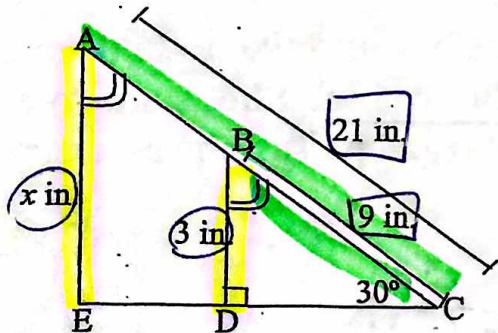
2.



4.



6.



$$\frac{x}{3} = \frac{21}{9}$$

$$9x = \frac{63}{9}$$

$$x = 7 \text{ in.}$$