

## Similar Figures Notes

**Similar Figures:** are figures that have the same shape, but not necessarily the same size.

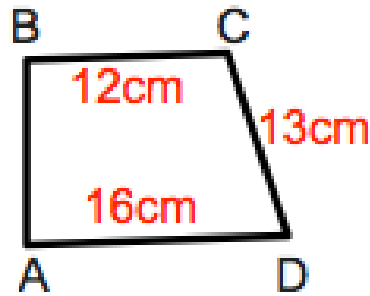
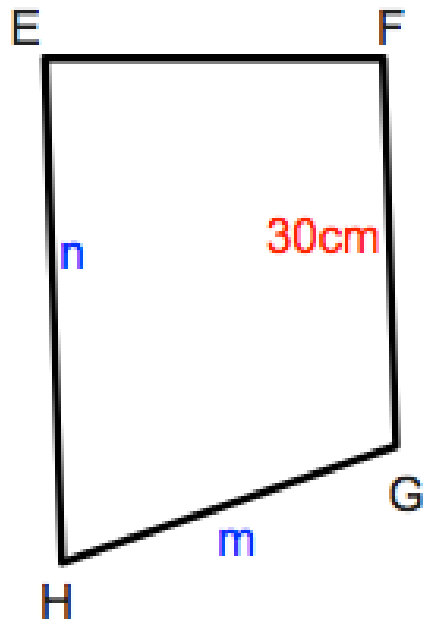
If two figures are similar, then

- the corresponding angles are congruent (same measure)
- the corresponding sides are proportional (constant of proportionality)

**Corresponding Parts:** angles and sides that are in the same position.

If two figures are similar, proportions can be used to find the missing measurements of the sides.

The figures are similar. Find each missing measure.



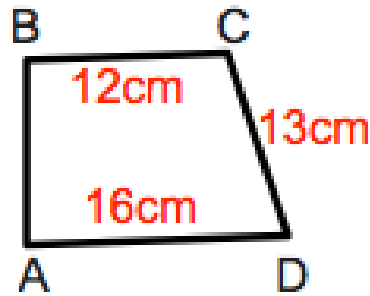
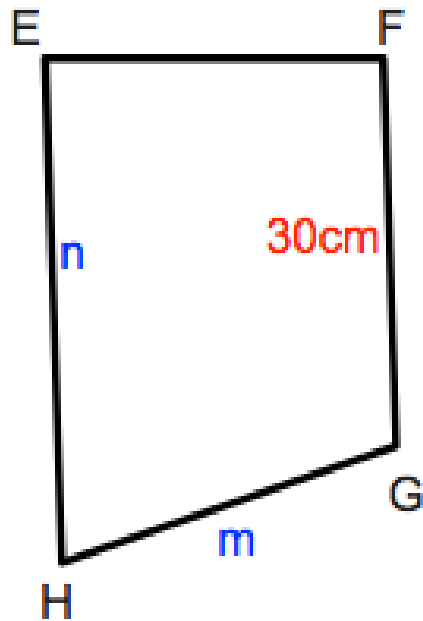
$$ABCD \sim EFGH$$

$$\frac{m}{30} = \frac{13}{12}$$

$$12m = 390$$

$$m = 32.5\text{cm}$$

The figures are similar. Find each missing measure.



$$ABCD \sim EFGH$$

~~$$\frac{n}{30} = \frac{16}{12}$$~~

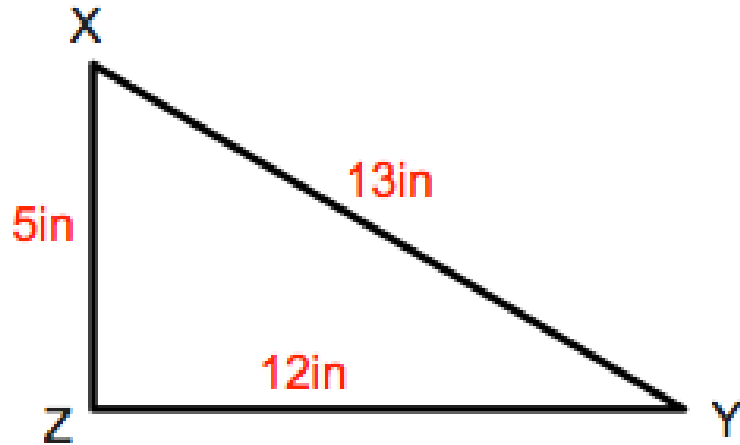
$$12n = 480$$

$$n = 40$$

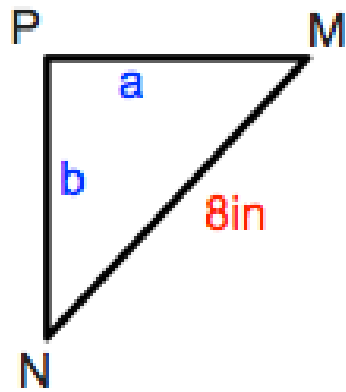
$$\frac{40}{30} = \frac{16}{12}$$

$$\frac{4}{3} = \frac{4}{3}$$

The figures are similar. Find each missing measure.



$$XYZ \sim MNP$$

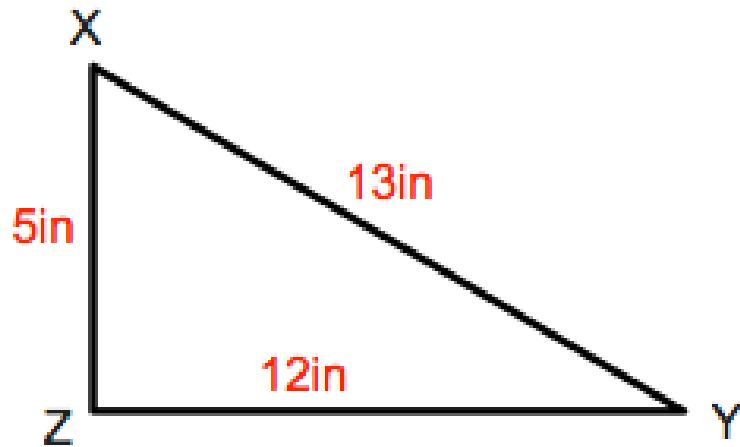


$$\frac{a}{8} = \frac{5}{13}$$

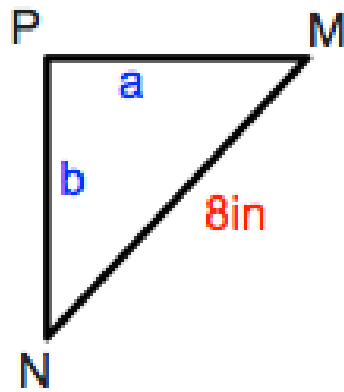
$$13a = 40$$

$$a = 3.1 \text{ in}$$

The figures are similar. Find each missing measure.



$$XYZ \sim MNP$$



$$\frac{b}{8} = \frac{12}{13}$$

$$13b = 96$$

$$b = 7.4 \text{ in}$$