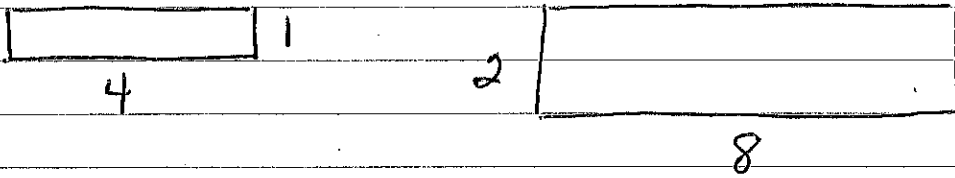


## CH9 Math 10AW - notes.

### Similar Polygons & Triangles

Scale - when one thing has the same ratio of sides or angles as another shape or line; but is smaller or bigger



The shapes are similar.  
The scale is 2.

To find the scale  $\rightarrow$   $\frac{\text{new drawing side}}{\text{original drawing side}}$

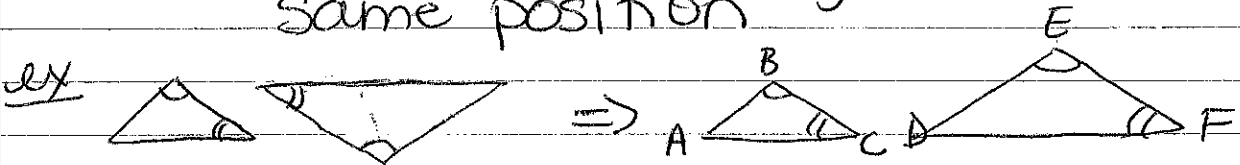
Note

\* the original is usually the 1st one on the left.

$$= \frac{8}{4} = 2$$

To find similar Polygons :

① Make sure they are in the same position



② Compare sides by  $\frac{\text{side}}{\text{side}}$  like above.

\* if all answers are the same then they are similar!

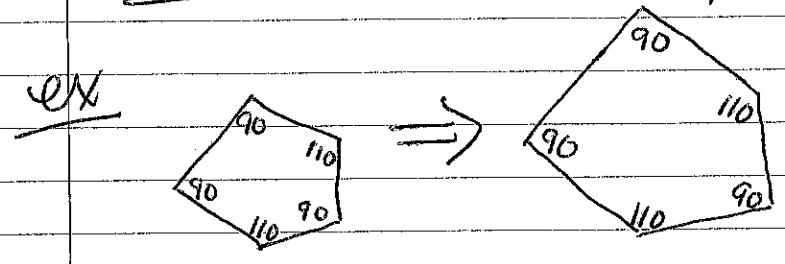
$$\frac{DE}{AC} =$$

$$\frac{DE}{AB} =$$

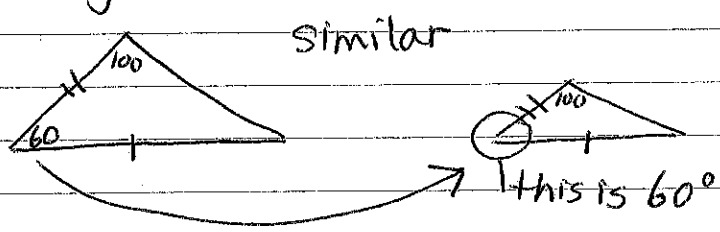
$$\frac{EF}{BC} =$$

# Angles in similar polygons & triangles

All angles are equal!

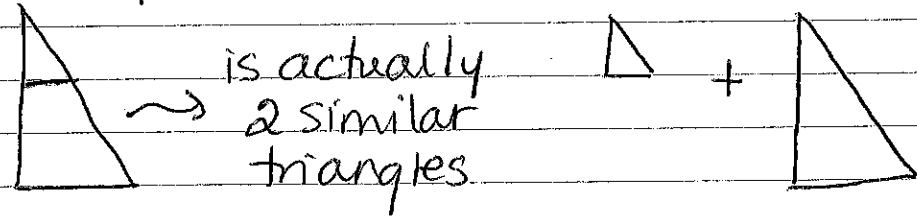


\* if you know they are similar - you can use the angles from one to get the other



\* remember  
sum of all  
angles in a  
triangle =  $180^\circ$

A triangle drawn like this



Scale factor - what ever it is

can be a whole number (2)  
a fraction ( $\frac{1}{4}$ )

or a percent ( $60\% \rightarrow \frac{60}{100} \rightarrow 0.60$ )  
or a decimal (0.25)

multiply when  
going orig  $\rightarrow$  new  
and divide  
new  $\rightarrow$  original