WS6.05 Student Activity 1: Junior Certificate

Construct the following triangle ABC, where $|AB| =$ any length in cm, $|\angle BAC| = 50^\circ$ and $|\angle ABC| = 70^\circ$ in the space provided below.
Using the same space provided below, construct another triangle DEF where $|DE| =$ any different length (to the above) in cm, $|\angle EDF| = 50^\circ$ and $|\angle DEF| = 70^\circ$.

Suggest two different methods to determine the size of the third angle.

Method 1:
Method 2:

Complete the following table:

Corresponding Angles	$\triangle ABC$	Corresponding Angles in $\triangle DEF$
$\angle ACB$ and $\angle$_______	$\lvert\angle ACB\rvert =$ ________ °	$\lvert\angle$______$\rvert =$ ________ °
$\angle BAC$ and $\angle$_______	$\lvert\angle BAC\rvert = 50^\circ$	$\lvert\angle$______$\rvert =$ ________ °
$\angle ABC$ and $\angle$_______	$\lvert\angle ABC\rvert = 70^\circ$	$\lvert\angle$______$\rvert =$ ________ °

What can you conclude from the above measurements?

Complete the following table, measuring the lengths of the sides as accurately as possible:

	$\triangle ABC$ Length(cm)	$\triangle DEF$ Length(cm)	Ratio
Corresponding sides $\lvert AB\rvert$ and $\lvert DE\rvert$	$\lvert AB\rvert =$ ____ cm	$\lvert DE\rvert =$ ____ cm	$\lvert AB\rvert : \lvert DE\rvert$ ____ : ____ 1 : ____
Corresponding sides $\lvert BC\rvert =$ ____	$\lvert BC\rvert =$ ____ cm	$\lvert$____$\rvert =$ ____ cm	$\lvert BC\rvert : \lvert$____$\rvert$ ____ : ____ 1 : ____
Corresponding sides $\lvert$____$\rvert$ and $\lvert$____$\rvert$	$\lvert$____$\rvert =$ ____ cm	$\lvert$____$\rvert =$ ____ cm	$\lvert$____$\rvert : \lvert$____$\rvert$ ____ : ____ 1 : ____

What can you conclude from the calculations above?

This is a Theorem on your course. Tick the box to the title of this theorem.

In an isosceles triangle the angles opposite the equal sides are equal.	
Two sides of a triangle are together greater than the third.	
Each exterior angle of a triangle is equal to the sum of the interior opposite angles.	
If two triangles are similar, then their sides are proportional, in order.	
Let ABC be a triangle. If a line l is parallel to BC and cuts [AB] in the ratio m:n, then it also cuts [AC] in the same ratio.	
The angles in any triangle add to 180°.	