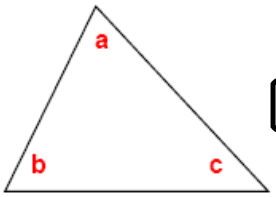
Geometry Theorems...

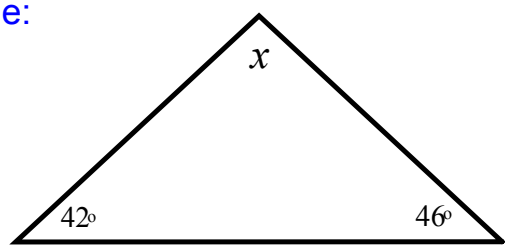
Triangle Angle Sum Theorem:

The sum of the interior angles of any triangle is 180°.



$a + b + c = 180°$

Example:



$180 - 42 - 46 = x$

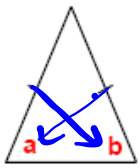
$x = 92°$

Isosceles Triangle Theorem:

In an isosceles triangle, the base angles are equal.

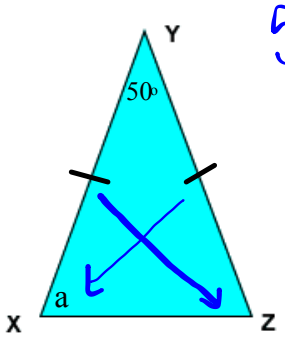
The two angles that are opposite to the equal sides.

$a = b$



EXAMPLES...

1)



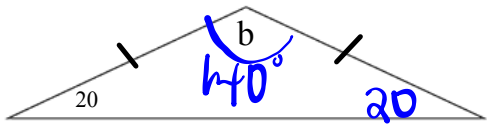
$50 + x + z = 180$

$x + z = 130$

$\frac{2x}{2} = \frac{130}{2}$

$x = 65°$

2)



$180 - 40 = b$

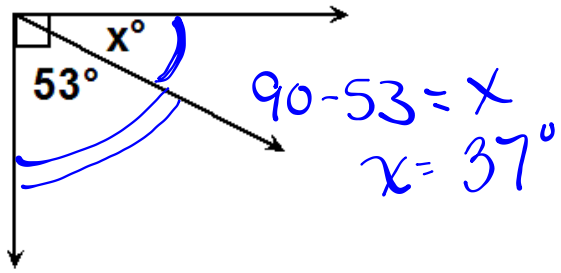
$b = 140°$

- **Complementary Angles:**
  Two or more angles that have a sum of 90°.

Examples:

(1) What is the complement of a 50 angle?

(2) Determine the measure of the missing angle.

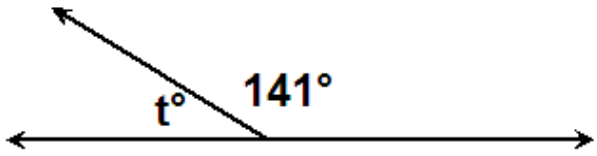


$90 - 53 = x$

$x = 37°$

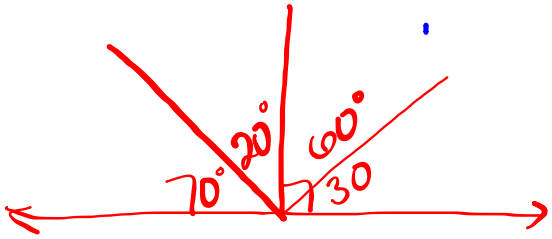
- **Supplementary Angles**:
  Two or more angles that have a sum of 180°.

Examples:



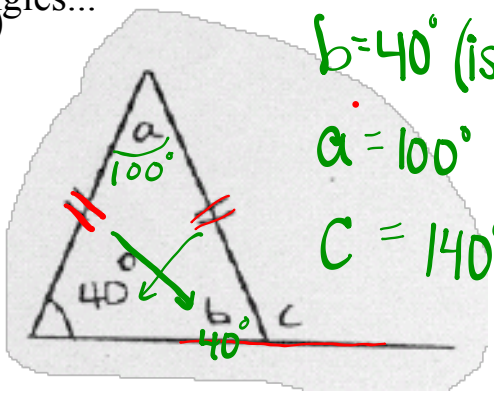
$180 - 141 = t$

$t = 39°$



EXERCISE: Use geometry theroems to determine the measure of missing angles...

1)

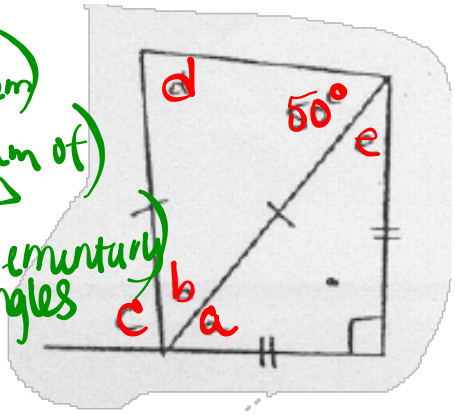


b = 40° (isosceles △ theorem)

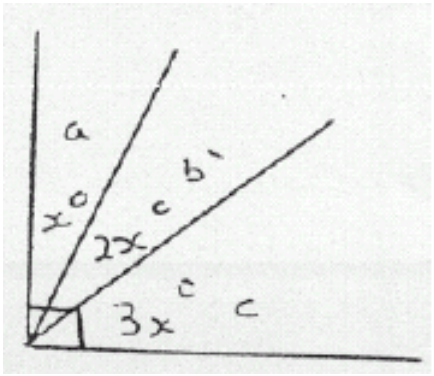
a = 100° (angle sum of △)

c = 140° (supplementary angles)

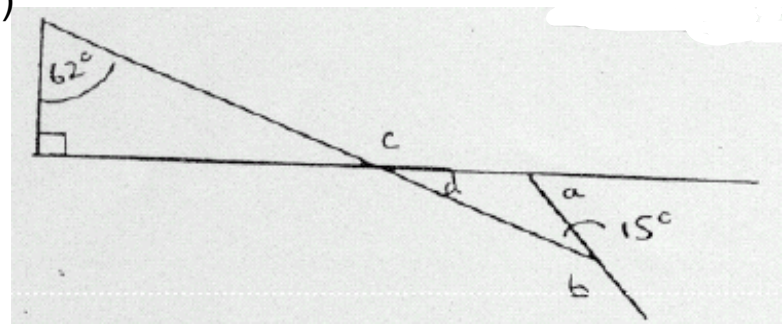
2)



3)



4)



"Exercise 7-6"

1. except g + h
2. all
3. omit
4. all

Attachments

Notes - Geometry Theorems.doc

Worksheet - Angle Properties.pdf

Worksheet Solutions - Angle Properties.pdf

Worksheet - Parallel Lines and Transversals.pdf

Worksheet Solutions - Parallel Lines and Transversals.pdf

In-Class Assignment - Parallel Lines and Transversals.pdf

7.4 - Build Your Skills Detailed Solutions.pdf