

# Similarity & Transformation

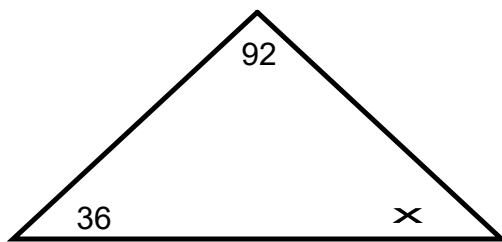
## Review of Basic Angle Properties

## Basic Angle Properties

1. The sum of the angles in a triangle is 180 degrees. SATT

EX:

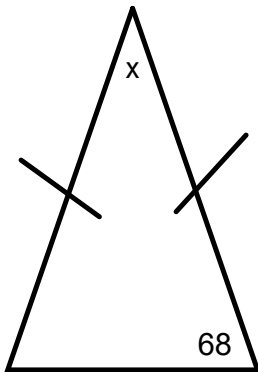
Find x



$$x = 180 - 92 - 36$$

$$x = 52$$

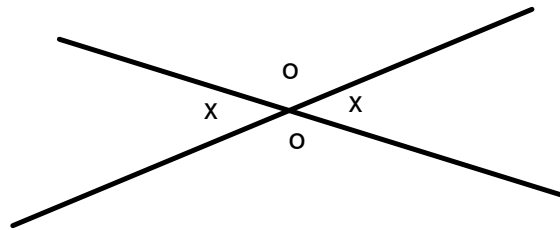
**Isosceles triangles have 2 equal sides and 2 equal angles**



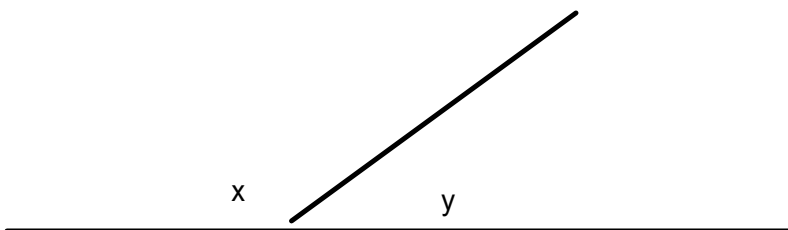
$$x = 180 - 68 - 68$$

$$x = 44$$

## 2. Opposite angles are equal (OAT) - Opposite Angle Theorem

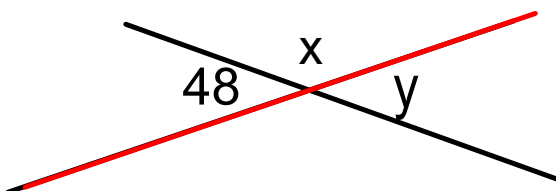


## 3. Angles formed on a straight line add up to 180 degrees. These are called supplementary angles. (SAT)



$$x + y = 180$$

Ex: Find  $x$  &  $y$

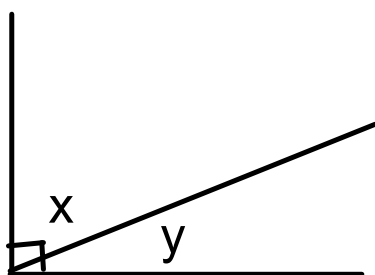


$$x = 180 - 48$$

$$x = 132$$

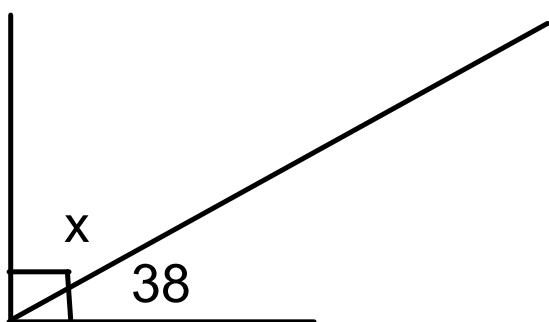
$$y = 48 \text{ (opposite angles)}$$

4. Complimentary Angles add up to 90 degrees. (CAT)



$$x + y = 90$$

Example: Find x



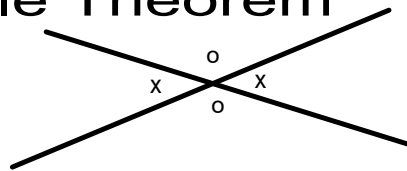
$$x = 90 - 38$$

$$x = 52$$

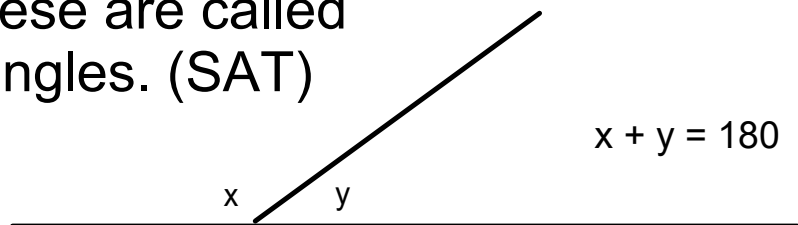
## Basic Angle Properties

1. The sum of the angles in a triangle is 180 degrees. SATT

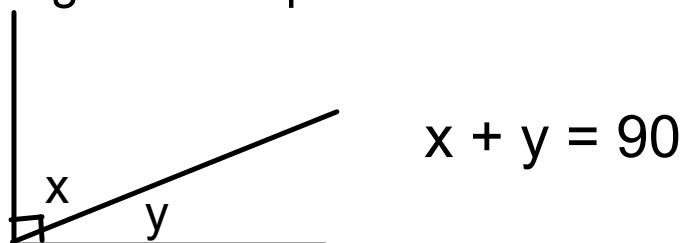
2. Opposite angles are equal (OAT) - Opposite Angle Theorem



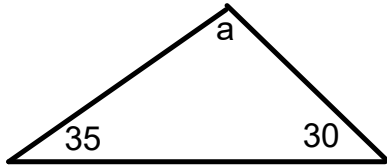
3. Angles formed on a straight line add up to 180 degrees. These are called supplementary angles. (SAT)



4. Complimentary Angles add up to 90 degrees. (CAT)

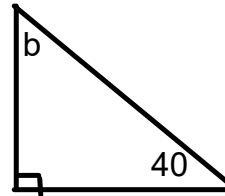


Find the missing angles:



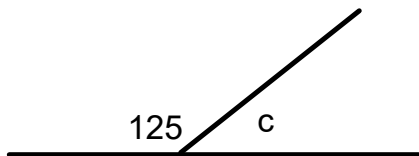
$$a = 180 - 30 - 35$$

$$a = 115$$



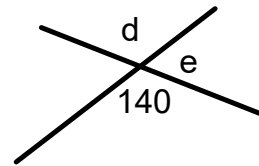
$$b = 180 - 90 - 40$$

$$b = 50$$



$$c = 180 - 125$$

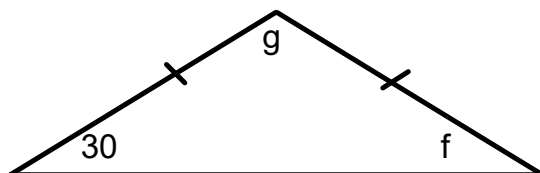
$$c = 55$$



$$d = 140 \text{ (OAT)}$$

$$e = 180 - 140$$

$$e = 40$$



$$f = 30$$

$$g = 180 - 30 - 30$$

$$g = 120$$

# MUST STATE PROPERTIES FOR REASONING

*Angle Measurement, Parallel Lines*

SHEET # 1 CALCULATE THE SIZE OF THE INDICATED ANGLES. FILL IN YOUR ANSWER ON THE ANSWER SHEET

1 	2 	3 	4 	5 
6 	7 	8 	9 	10 
11 	12 	13 	14 	15 
16 	17 	18 	19 	20 

