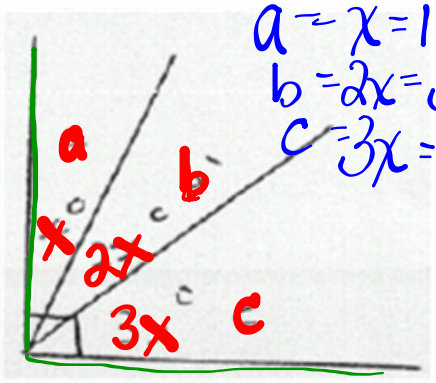
Warm-up

3)



$a = x = 15°$

$b = 2x = 30°$

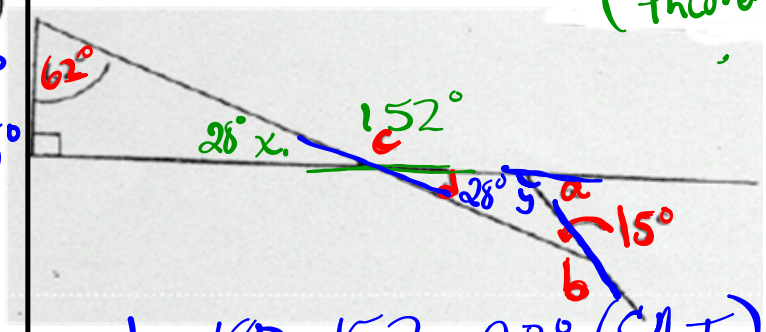
$c = 3x = 45°$

$90° = x + 2x + 3x$

$\frac{90°}{6} = \frac{6x}{6}$

$x = 15°$

4)



$c = 152°$ (Supp. thm)

$d = 180 - 152 = 28°$ (SAT)

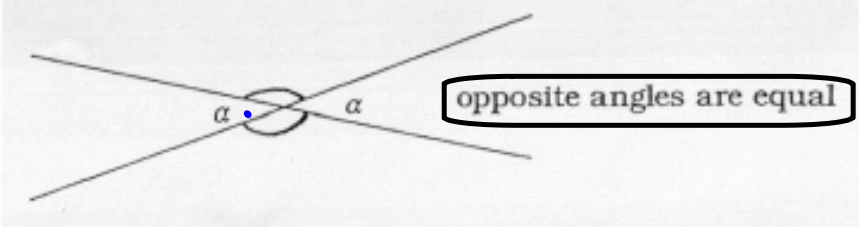
$b = 180 - 15 = 165°$ (SAT)

$y = 180 - 28 - 15 = 137°$ (SAT)

$180 - 137° = 43°$ (SAT

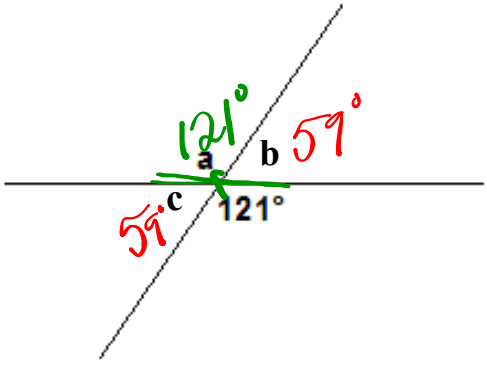
Opposite Angle Theorem...

When 2 straight lines cross, 2 pairs of opposite angles are formed. Opposite angles are equal in size



In geometry, angles or lines marked with the same symbol are the same size.

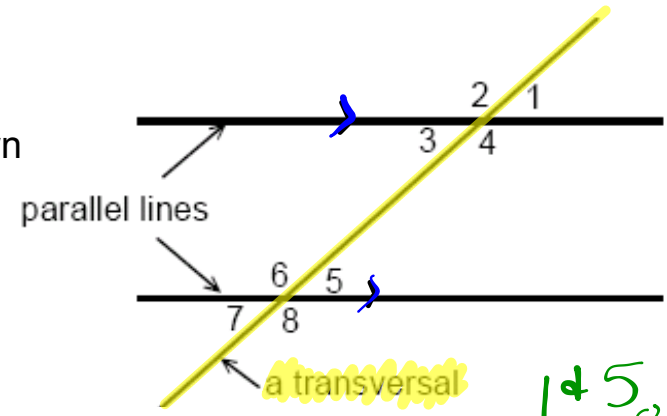
Example:



a = 121° (OAT)
b = 180 - 121 = 59° (SAT)
c = 59° (OAT)

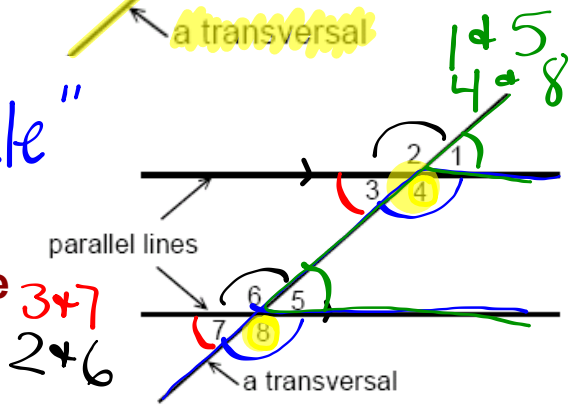
Parallel Line Theorems

A **transversal** is a third line that crosses two or more lines, as shown in the illustration to the right.



Corresponding Angles: "F rule"

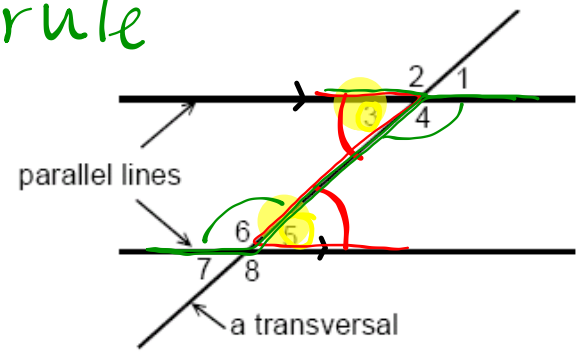
Pairs of angles on the same side of a transversal and the same side of the parallel lines



CORRESPONDING ANGLES ARE EQUAL

Alternate Interior Angles: "Z rule"

Pairs of angles on the opposite sides of a transversal and between the parallel lines



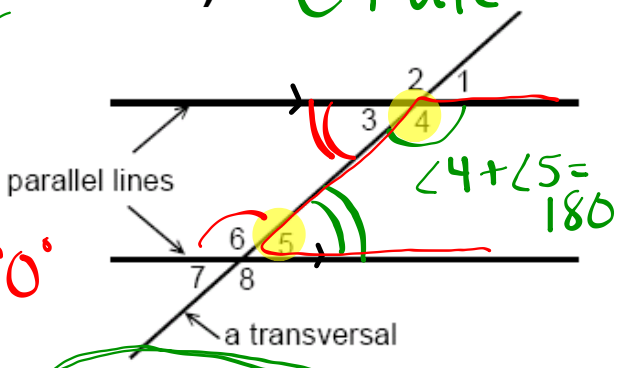
ALTERNATE INTERIOR ANGLES ARE EQUAL

∠3 + ∠5 are equal

∠4 = ∠6

Co-Interior Angles (Same-side Interior): "C rule"

Pairs of angles on the same side of a transversal and between the parallel lines

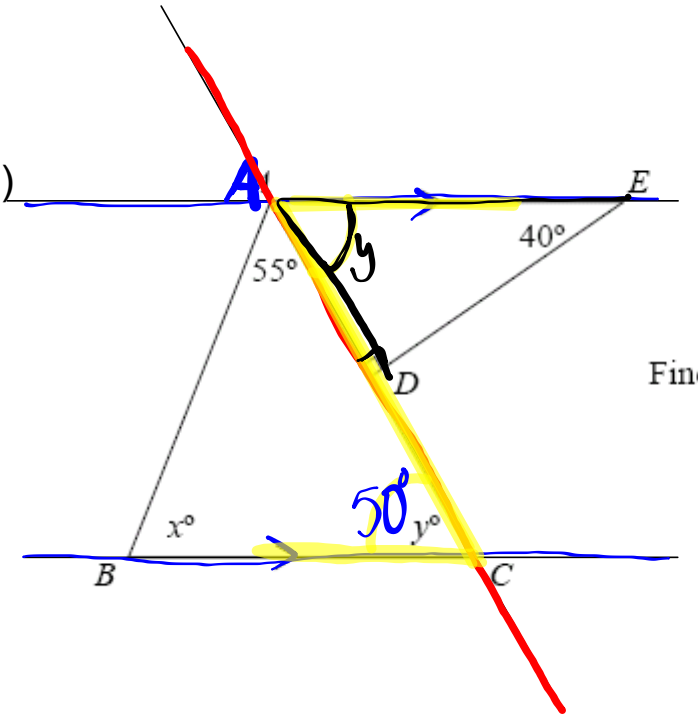


∠4+∠5= 180

∠3+∠6=180°

CO-INTERIOR ANGLES ARE SUPPLEMENTARY

C)



Find $x°$ and $y°$.

$y = \angle EAD$ (AIA)

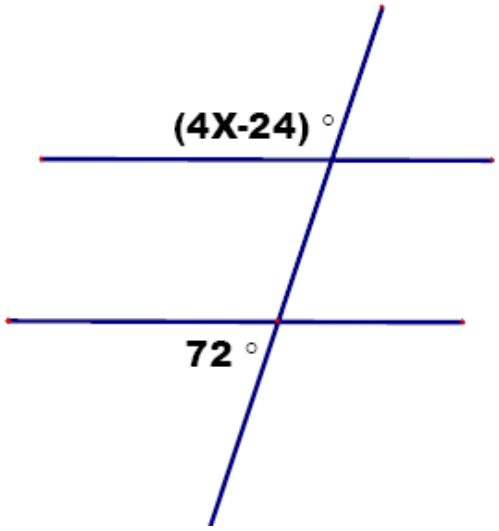
$\angle EAD = 180 - 40 - 90$

$= 50°$ (SATT)

$y = 50°$

$x° = 180 - 50 - 55 = 75°$ (SATT)

D)



x = _____

Homework

2 & 3 (middle section of same sheet as last night)

then g & h that we skipped last night.

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