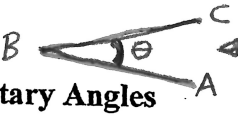
GEOMETRY REVIEW

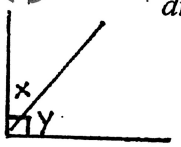
Name _____

Definitions:



$\theta = \angle CBA = \angle ABC = \angle B$

diagrams



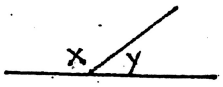
$x + y =$ 90°

CA - Complementary Angles

Complementary angles add to 90°

SA - Supplementary Angles

Supplementary angles add to 180°

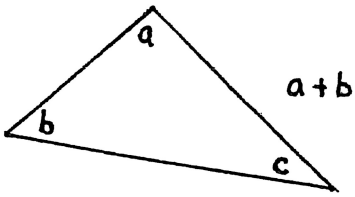


$x + y =$ 180°

Angle Theorems:

ASTT - Angle Sum of a Triangle Theorem

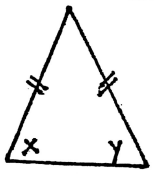
The sum of the angles in a triangle is 180°



$a + b + c =$ 180°

ITT - Isosceles Triangle Theorem

The angles opposite the equal sides are equal



$x = y$

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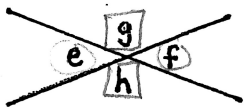
* **OAT - Opposite Angle Theorem**

Opposite angles are _____



$e = f$

$g = h$

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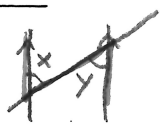
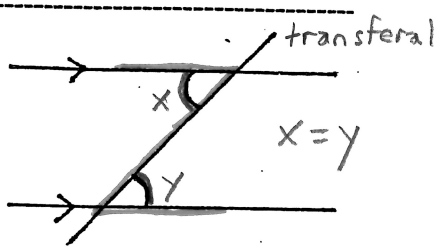
* *Parallel Line Theorems:*

PLT-Z - Parallel Line Theorem - Z-pattern (**ALTERNATE** angles)

Alternate angles are equal





$x = y$

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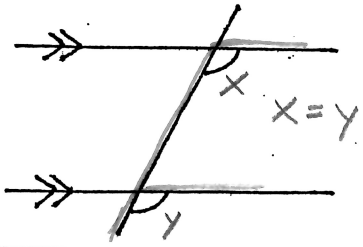
* **PLT-F** - Parallel Line Theorem - F-pattern (**CORRESPONDING** angles)

Corresponding angles are equal

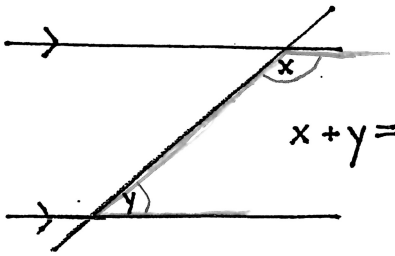


$x = y$

PLT-C - Parallel Line Theorem - C-pattern (**CO-INTERIOR** angles)

Co-interior angles are supplementary

ie. They add up to 180°

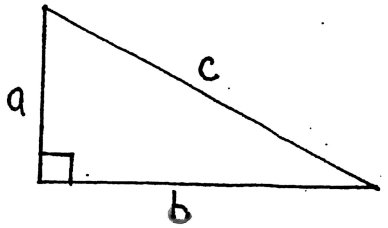


$x + y =$ 180°

PYTHAGOREAN THEOREM $a^2 + b^2 = c^2$ or $c^2 = a^2 + b^2$

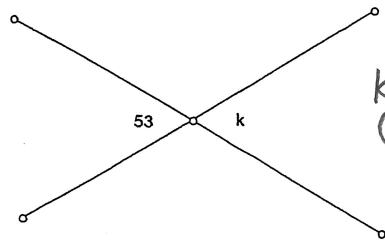
The sum of the squares of the smallest two sides in a right-angled triangle is equal to the square of the hypotenuse.

Exterior Angle Theorem (EAT)



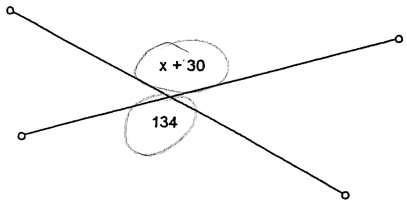
mfm2p1 **Geometry Worksheet** Name _____

1.



$k = 53°$ (OAT)

2.



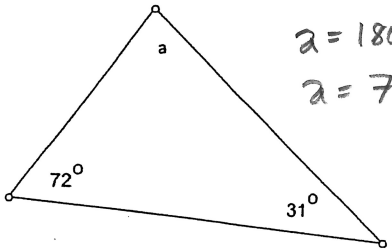
(OAT)

$x + 30° = 134°$

$x = 134° - 30°$

$x = 104°$

3.

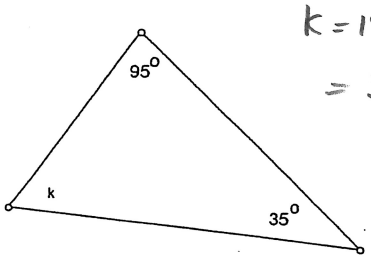


(ASTT)

$a = 180° - 72° - 31°$

$a = 77°$

4.

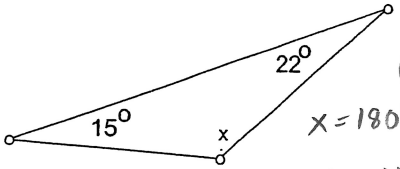


(ASTT)

$k = 180° - 95° - 35°$

$= 50°$

5.

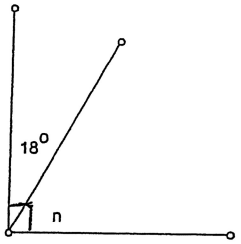


(ASTT)

$x = 180° - 15° - 22°$

$x = 143°$

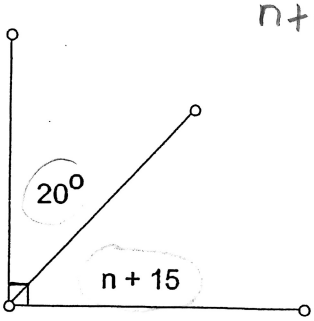
6.



$n = 90° - 18°$ (CA)

$= 72°$

7.



(CA)

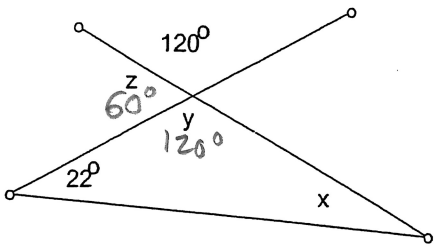
$n + 15° + 20° = 90°$

$n + 35° = 90°$

$n = 90° - 35°$

$n = 55°$

8.



(SA)

$z = 180° - 120°$

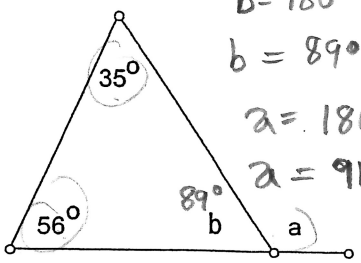
$z = 60°$

$y = 120°$ (OAT)

$x = 180° - 120° - 22°$ (ASTT)

$x = 38°$

9.



(ASTT)

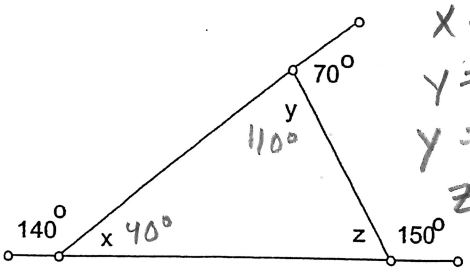
$b = 180° - 35° - 56°$

$b = 89°$

$a = 180° - 89°$ (SA)

$a = 91°$

10.



$x = 180° - 140°$ (SA)

$x = 40°$

$y = 180° - 70°$ (SA)

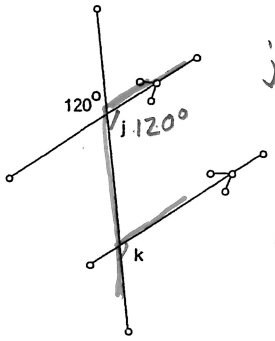
$y = 110°$

$z = 180° - 150°$ (SA)

$z = 30°$

mfm2p1 **Parallel Line Properties Worksheet** Name_____

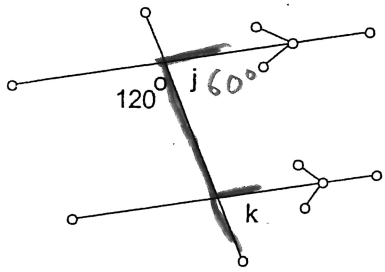
1.



$j = 120°$ (OAT)

$k = 120°$ (PLT-F)

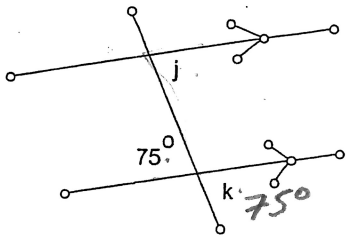
2.



$j = 60°$ (SA)

$k = 60°$ (PLT-F)

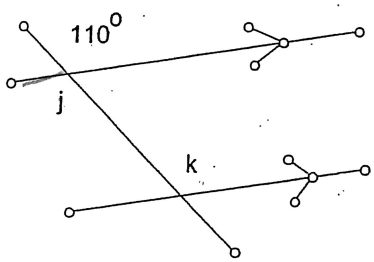
3.



$k = 75°$ (OAT)

$j = 75°$ (PLT-F)

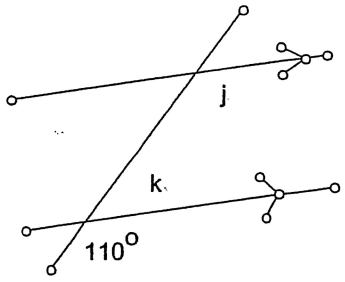
4.



$j = 110°$ (OAT)

$k = 110°$ (PLT-Z)

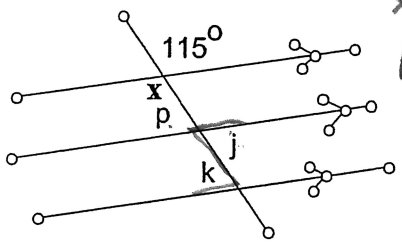
5.



$j = 110°$ (PLT-F)

$k = 70°$ (SA)

6.



$x = 115°$ (OAT)

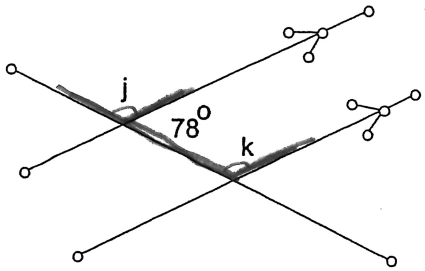
$p = 180° - 115°$ (PLT-C)

$= 65°$

$j = 65°$ (OAT)

$k = 65°$ (PLT-Z)

7.

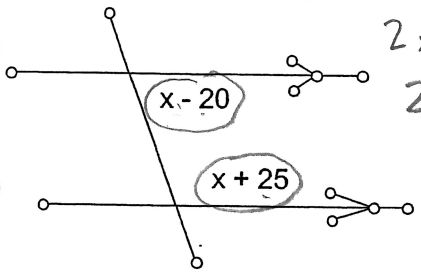


$j = 180° - 78°$ (SA)

$= 102°$

$k = 102°$ (PLT-F)

8.



(PLT-C)

$(x - 20) + (x + 25) = 180°$

$2x + 5° = 180°$

$2x = 180° - 5°$

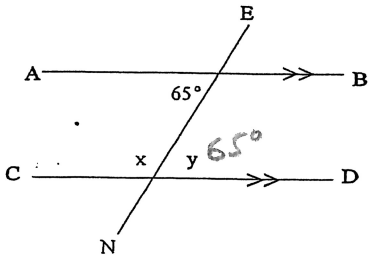
$\frac{2x}{2} = \frac{175°}{2}$

$x = 87.5°$

MFM 2P1 **GEOMETRY** Name_____

Examples Find the measures of the unknown angles.

a)

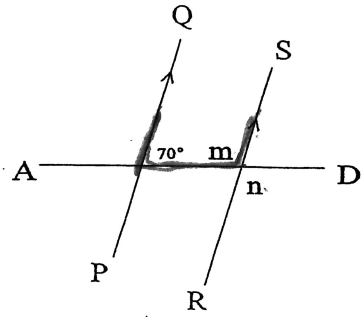


$x = 180° - 65°$ (SA)

$= 115°$

$y = 65°$ (PLT-Z)

b)

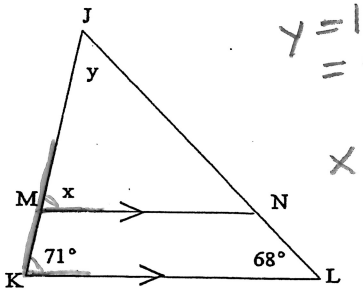


$m = 180° - 70°$ (PLT-C)

$= 110°$

$n = 110°$ (OAT)

c)

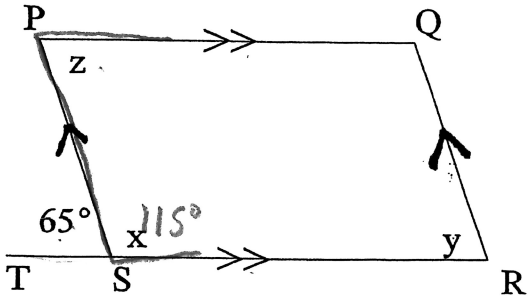


$y = 180° - 71° - 68°$ (ASTT)

$= 41°$

$x = 71°$ (PLT-F)

d)



$x = 180° - 65°$ (SA)

$x = 115°$

$z = 180° - 115°$ (PLT-C)

$z = 65°$

$y = 180° - 115°$ (PLT-C)

$= 65°$