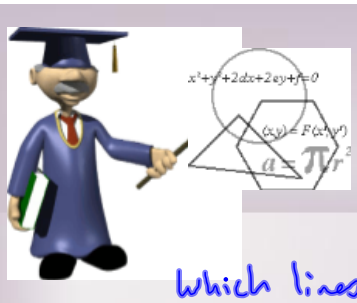
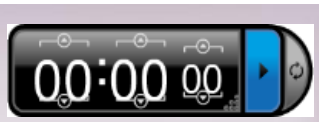


Morning! :)

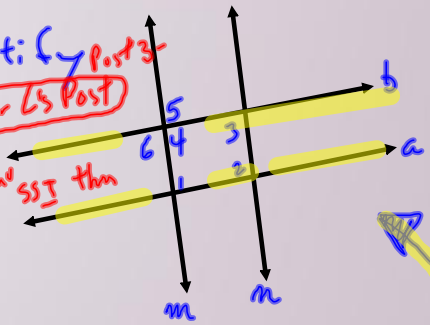


Which lines are ll? Justify Post 3

(1) $\angle 6 \cong \angle 3$ m ll n, Conv Corr $\angle$s Post

(2) $\angle 1$ & $\angle 4$ suppl all b, conv SSI thm

(3) $\angle 2 \cong \angle 4$ NP



If $m\angle 1 = 3x+10$, $m\angle 2 = 3x+14$, $m\angle 6 = x+58$

(4) Find x so all b $\angle 1, \angle 6$ are ind $\angle$s $\cong$ $m\angle 1 = m\angle 6$

$3x+10 = x+58$

$-x \quad -10 \quad -x \quad -10$

$2x = 48$

$x = 24$

x = 24

(5) Find x so m ll n

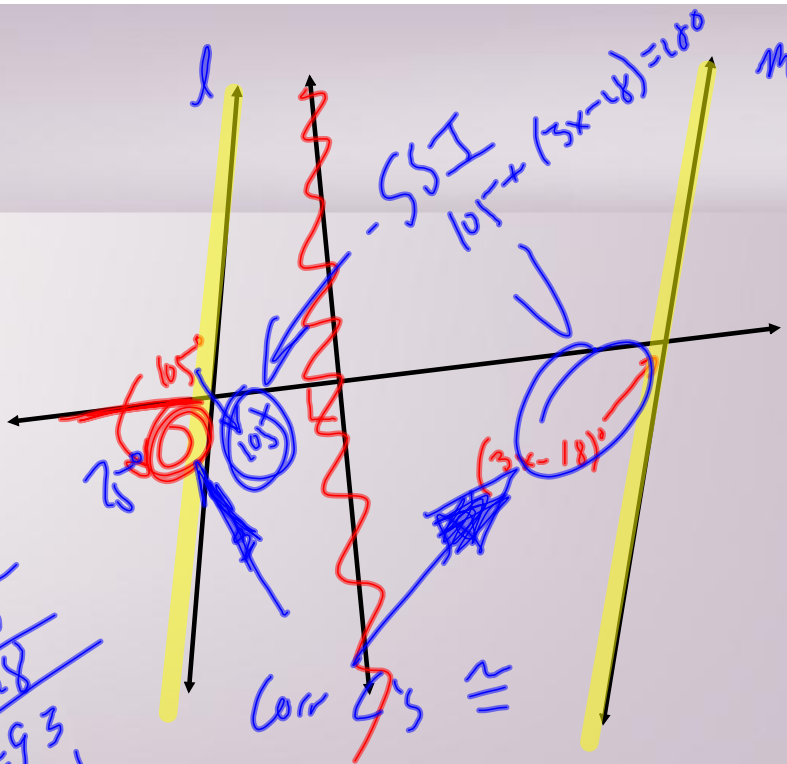
x = 26

$(3x+10)+(3x+14)=180$

$m\angle 1 + m\angle 2 = 180$

SSI $\angle$s Suppl

(21)



$3x - 18 = 75$

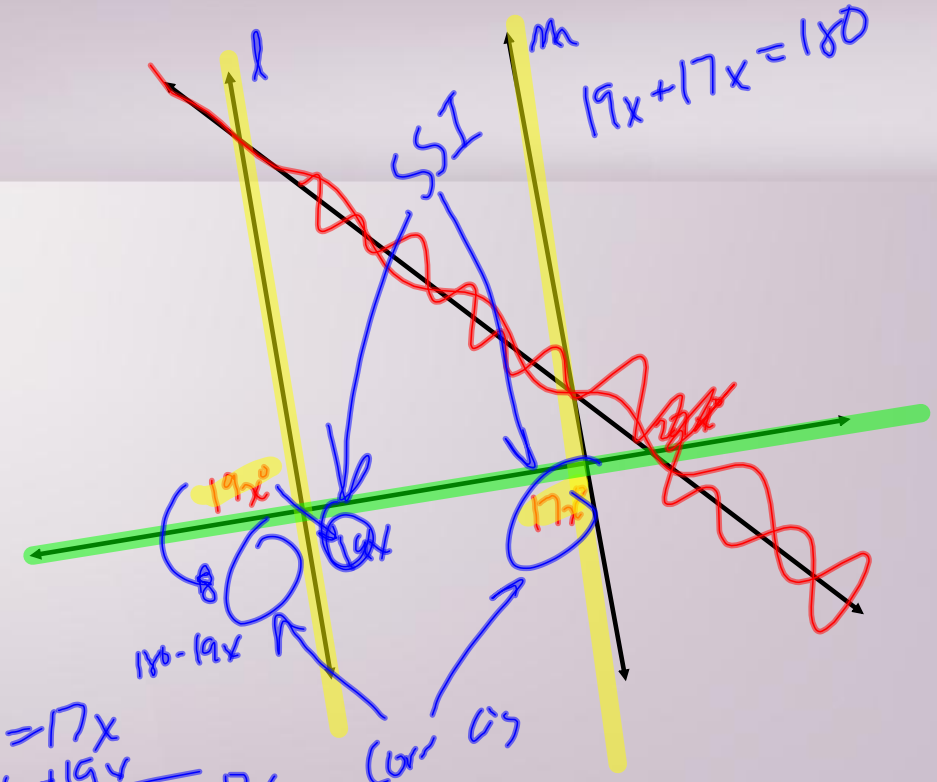
$+18 \quad +18$

$3x = 93$

$x = 31$

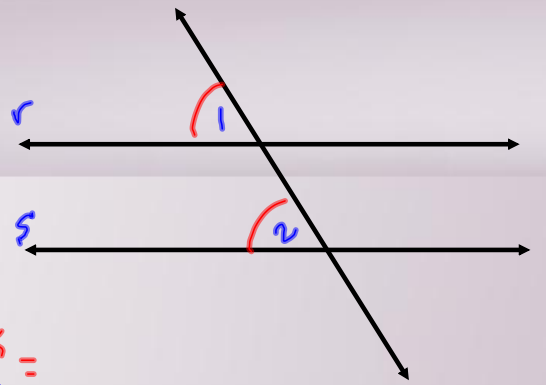
Corr $\angle$s $\cong$

(22)



$180 - 19x = 17x$
$+19x \quad +19x$
$180 = 19x + 17x$

(29)

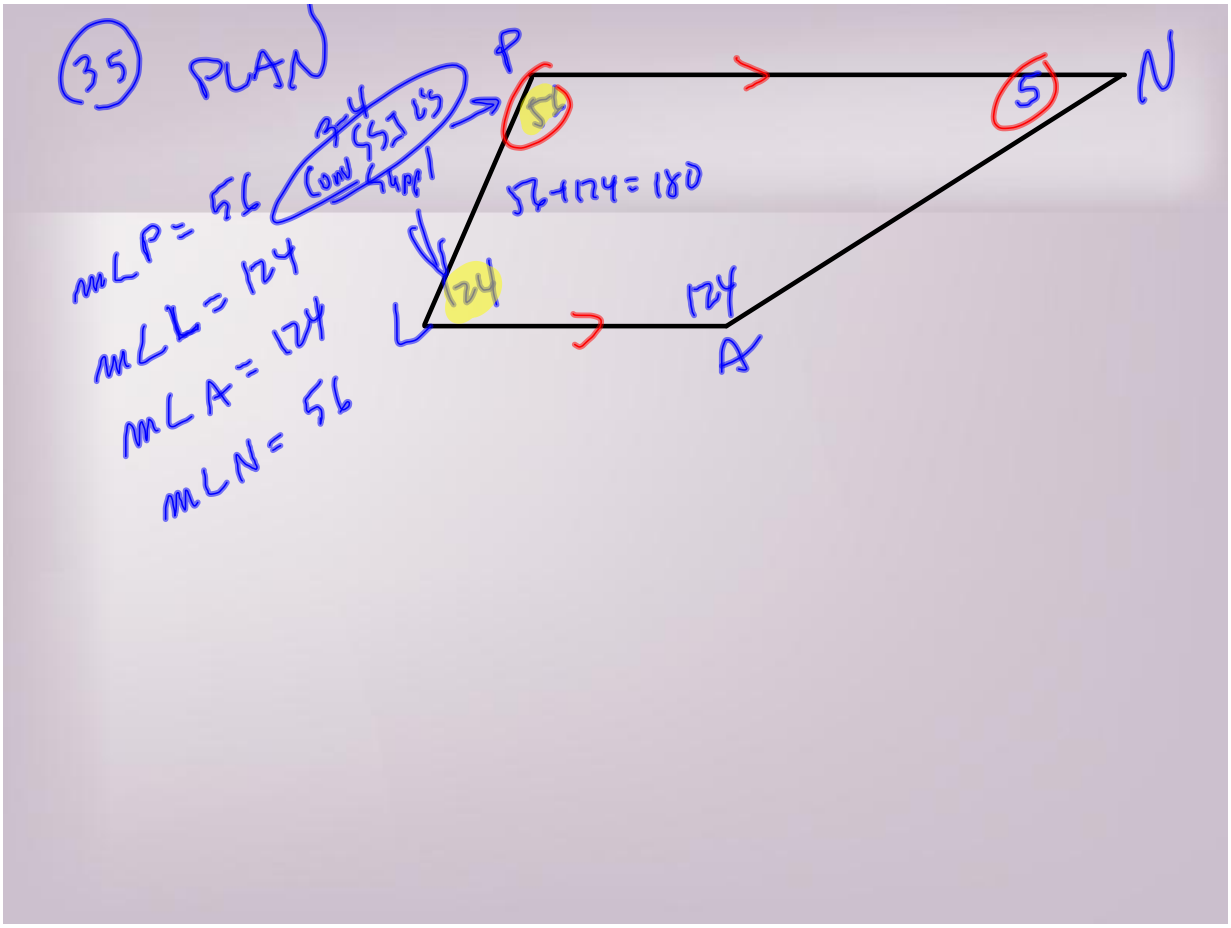


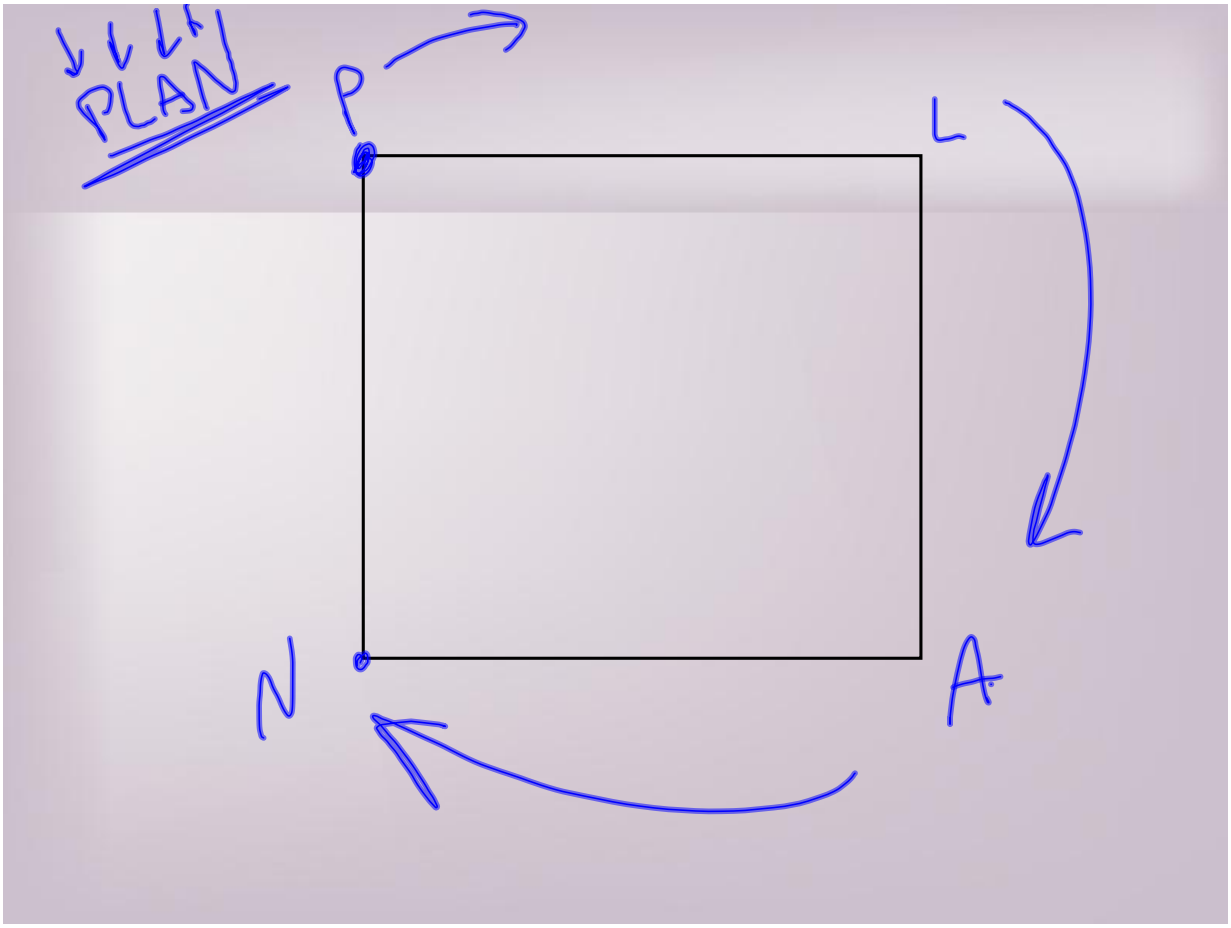
$m\angle 1 = 40 - 4x = 25$

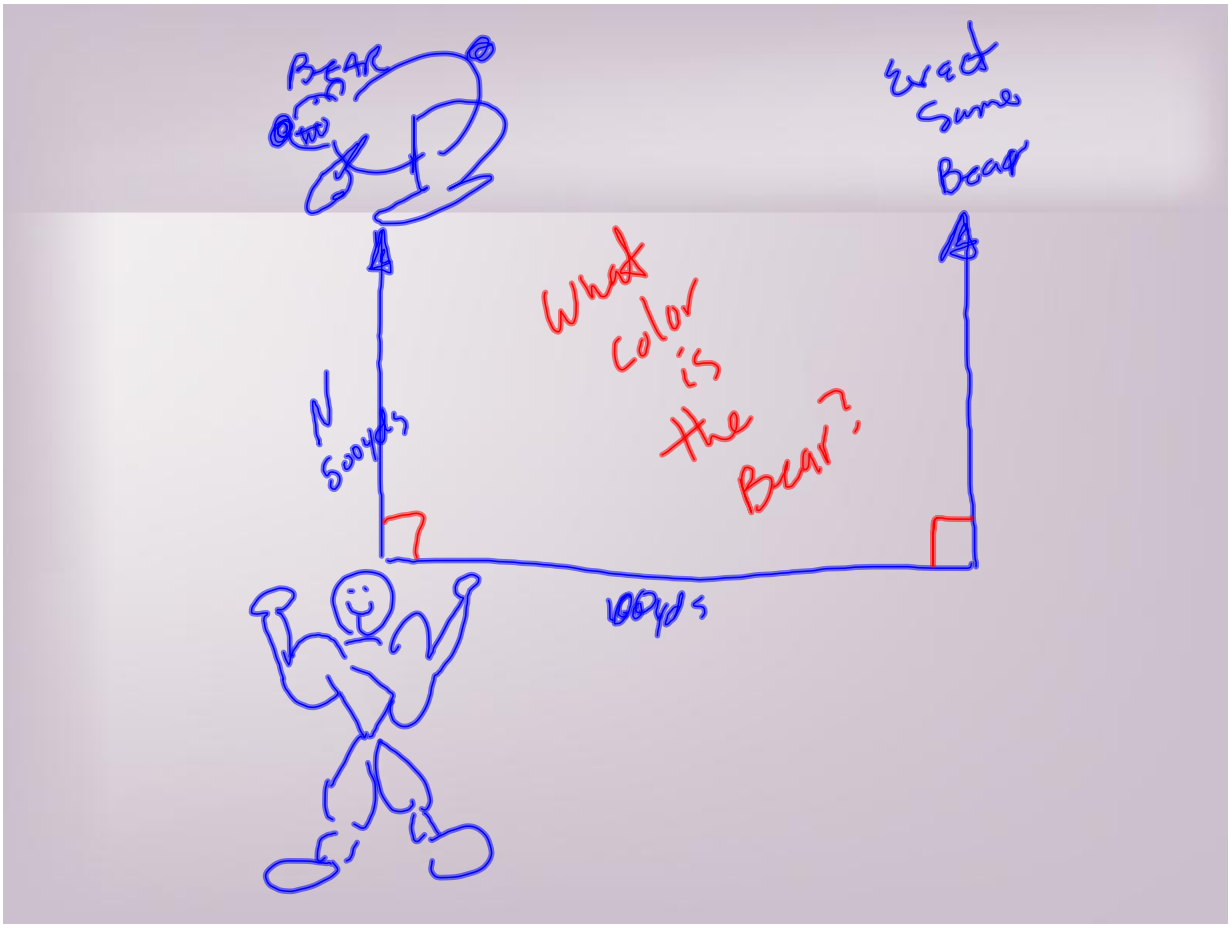
$m\angle 2 = 50 - 8x = 25$

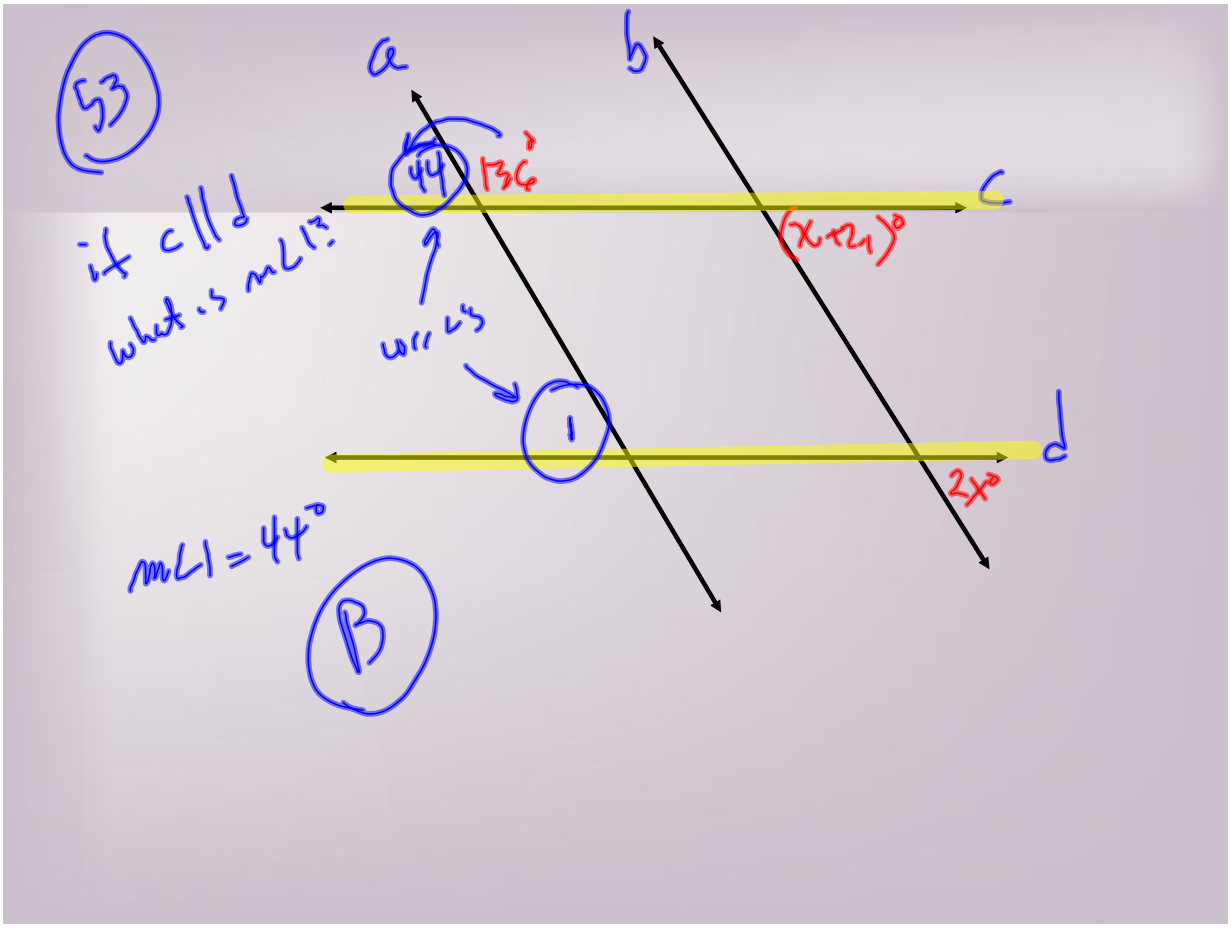
$\cong$ Corr ∠'s

$40 - 4x = 50 - 8x$
$-40 \quad +8x \quad -40 \quad +8x$
$4x = 10$
$x = 2.5$


(35) PLAN
P
N
L
A
56
124
124
124
56
56 + 124 = 180
mLP = 56
mLL = 124
mLA = 124
mLN = 56

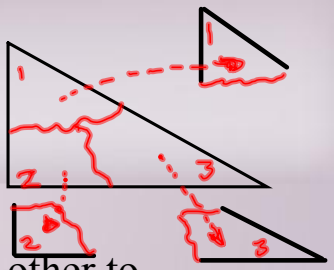

PLAN
P
L
N
A


BEAR
Exact Same Bear
What color is the Bear?
N 500yds
100yds


53
a
b
44
136°
c
(x+21)°
if c ∥ d
what is m∠1?
corr ∠s
1
d
2x°
m∠1 = 44°
B

* Draw and cut out a large triangle.

* Number the angles and tear them off.



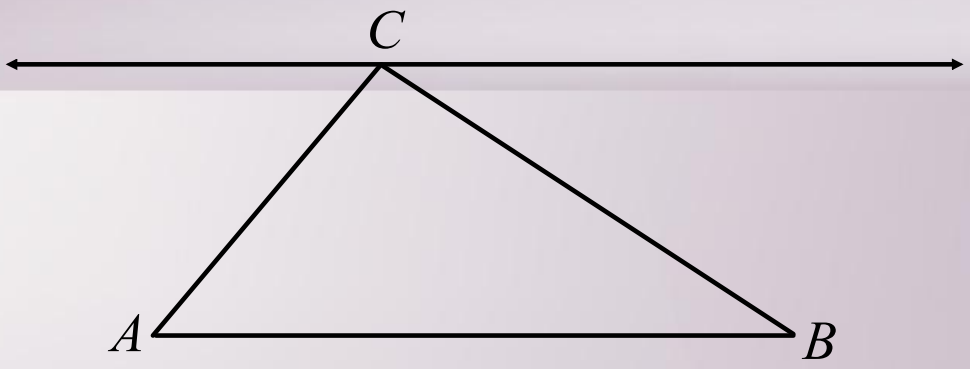
* Place the 3 three angles adjacent to each other to form one angle.

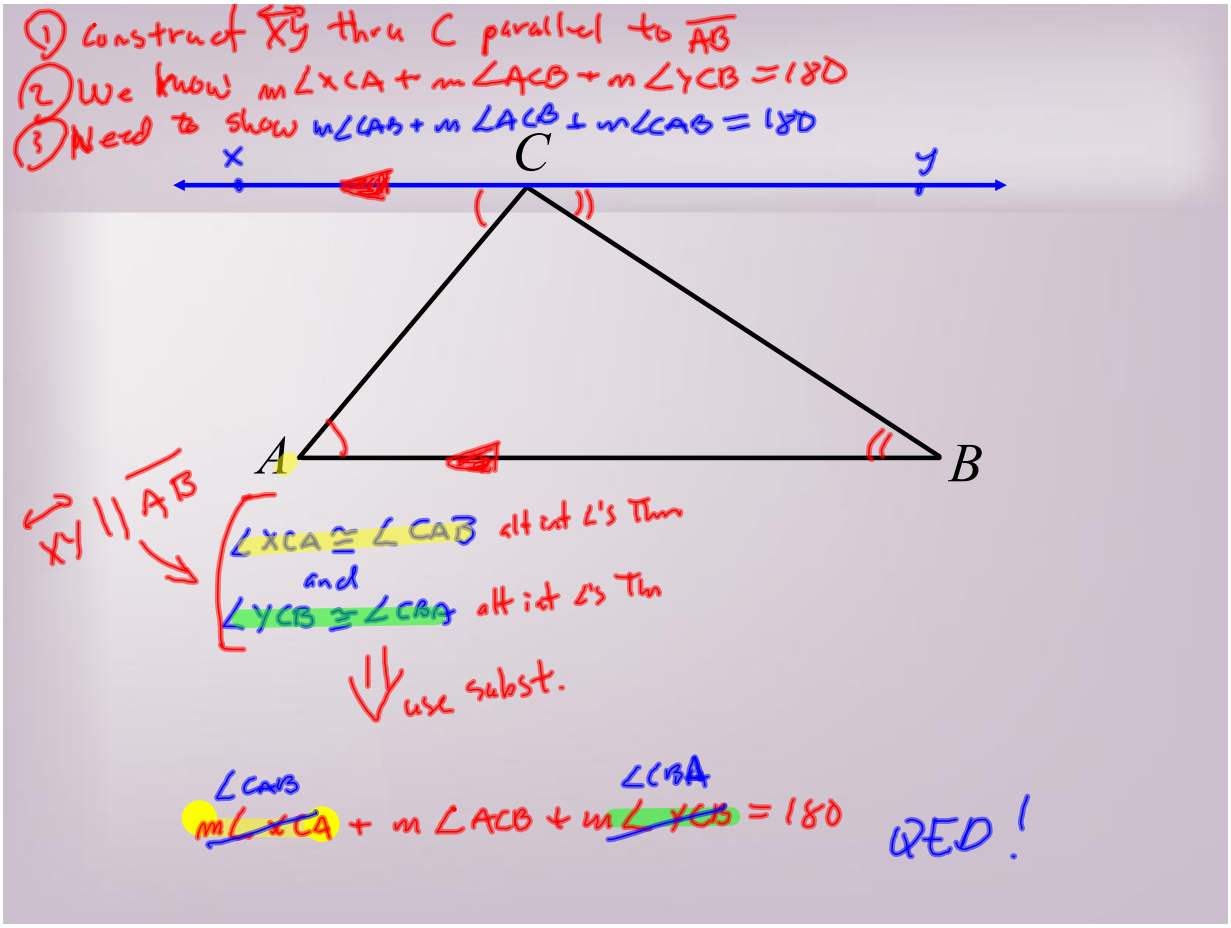
Now...

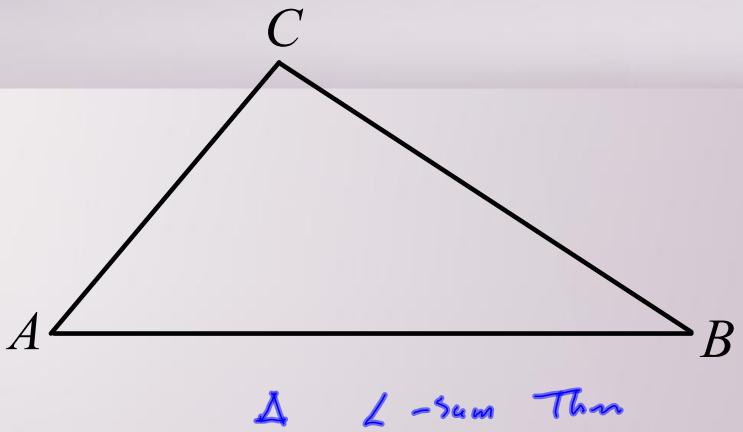
1) Compare your results with your table mates.
Write down your observations.

2) Make a conjecture about the sum of the measures of the angles of ***any*** triangle.

Conj: $m\angle 1 + m\angle 2 + m\angle 3 = 180$







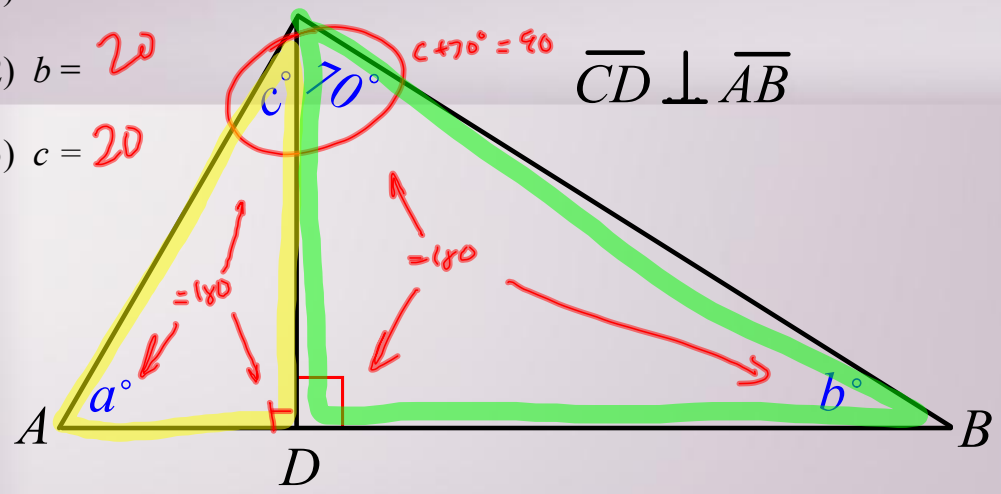
Theorem 3-7 *Triangle Angle-Sum Theorem*

The sum of the measures of the ∠'s of a △ is 180.

1) $a =$ 70

2) $b =$ 20

3) $c =$ 20



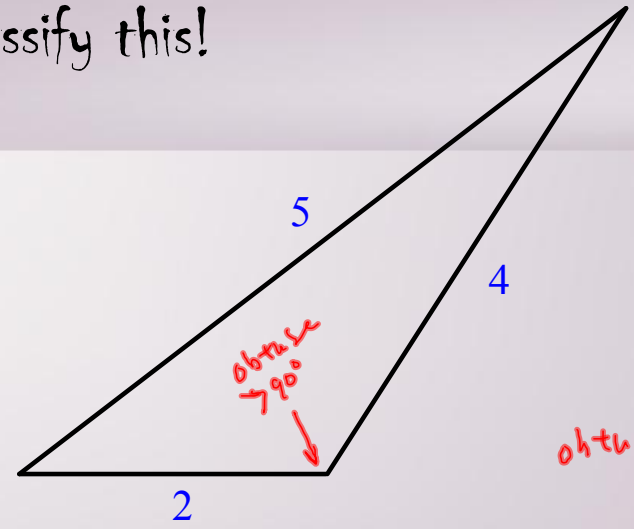
Classifying Triangles

Classify by ∠ relationship and by side relationship

Equiangular Δ	all ∠'s ≅
Acute Δ	all ∠'s acute
Right Δ	1 rt ∠
Obtuse Δ	1 obtuse ∠

Equilateral	all sides's ≅
Isosceles	2 sides ≅
Scalene	no sides ≅

Classify this!



obtuse scalene

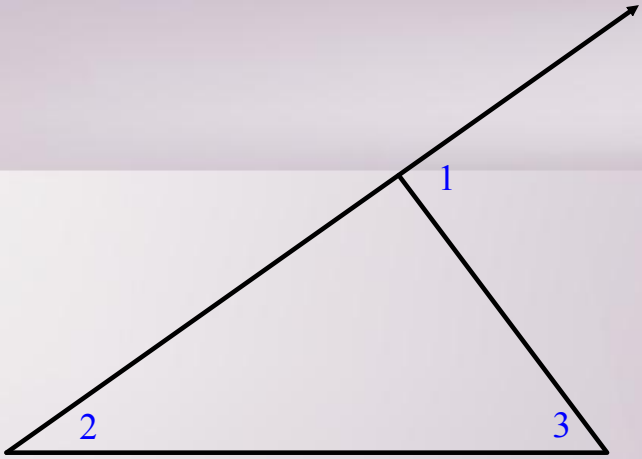
Are these possible?

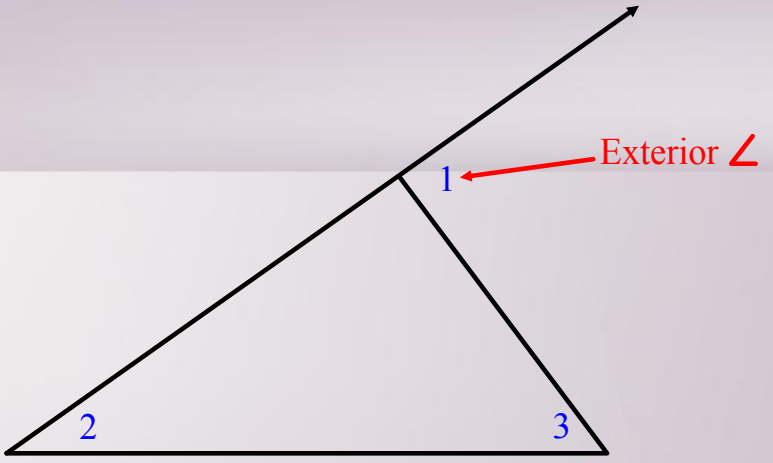
obtuse equiangular Δ? → NO

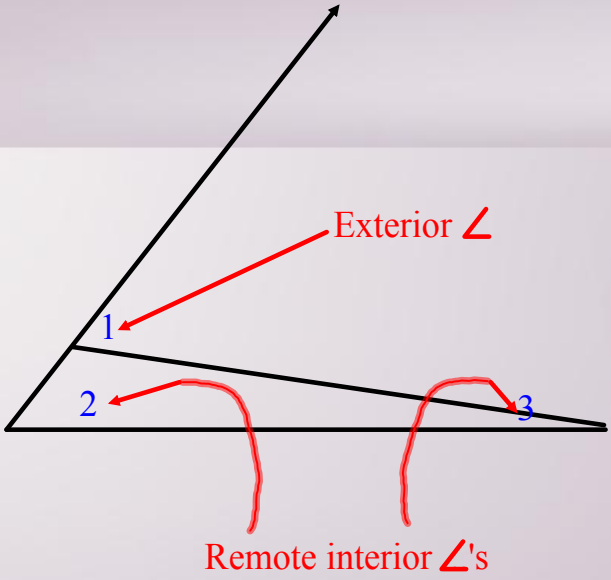
(< 90° | all the same)

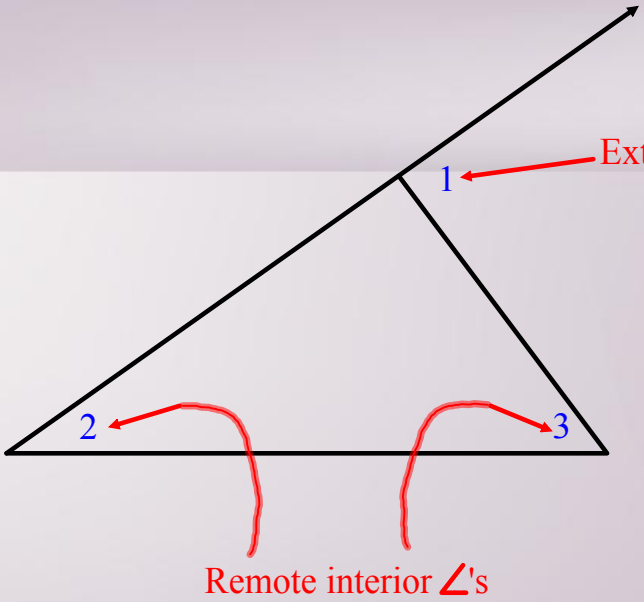
obtuse equilateral Δ? → NO

(< 90° | all sides same len)


1
2
3


Exterior ∠
1
2
3


Exterior ∠
1
2
3
Remote interior ∠'s


Exterior ∠
1
∠ formed by a side and the extension of the adjacent side
2
3
Remote interior ∠'s

* Draw and cut out a large triangle.

* Extend one side and number the resulting exterior angle 1.

* Number the remote interior angles and tear them off.

* Place the 2 angles adjacent to each other over the exterior angle.

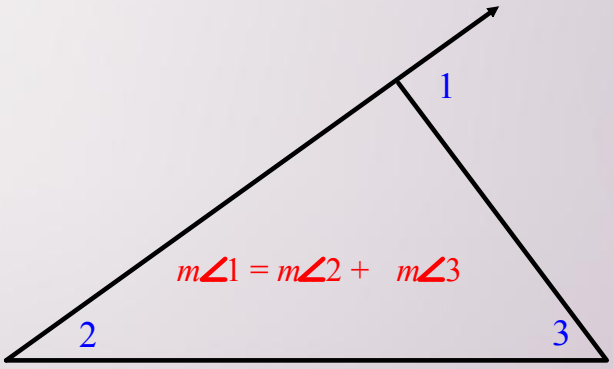
Now…

1) Compare your results with your table mates.

2) Make a conjecture about the relationship of each exterior and the corresponding remote interior angles of ***any*** triangle.

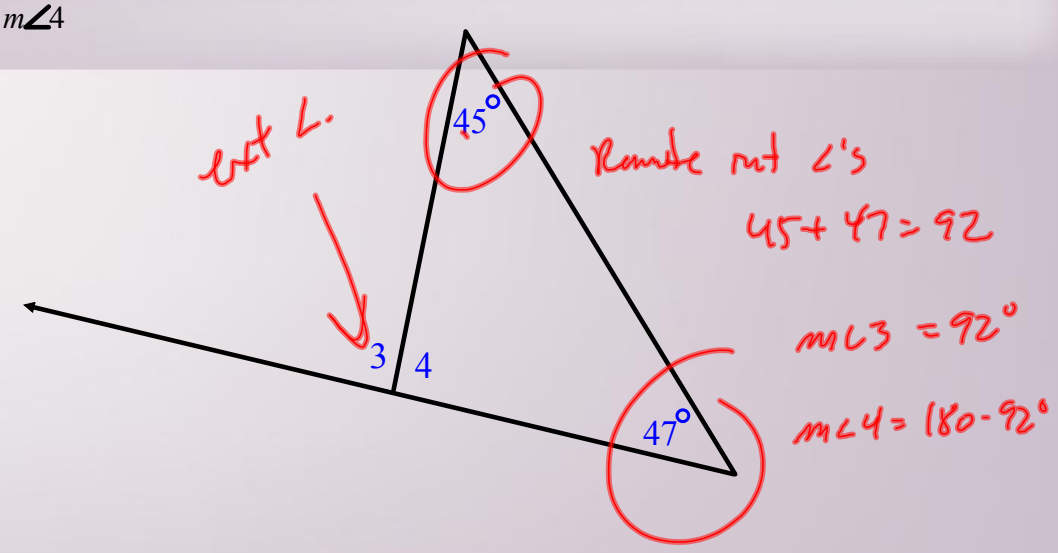
Theorem 3-8 The △ Exterior Angle Theorem

The measure of each ext ∠ = sum of the measures of the 2 remote int ∠'s.



Find $m\angle 3$

and $m\angle 4$



L3-3 HW Problems

Pg 134 #1-11, 17-33 odd, 43-49 odd, 52, 64-67
Pg 139 #1-10