Station 1

Use the Law of Syllogism (Chain of Reasoning) to draw a conclusion.

$h \to b$ $\quad$ $a \to h$

If her mom is happy, then Sally goes to bed early. If Sally eats an apple, then her mom will be happy. If Sally goes to bed early, then she will not get sick.

$b \to \sim s$

(Chapter 2)

$a \to h$
$h \to b$
$b \to \sim s$

If Sally eats an apple, then she will not get sick.

Station 2

The measure of an angle is 6 more than twice the measure of the supplement. Find the measure of the supplement of the angle.

$x = 2(180 - x) + 6$

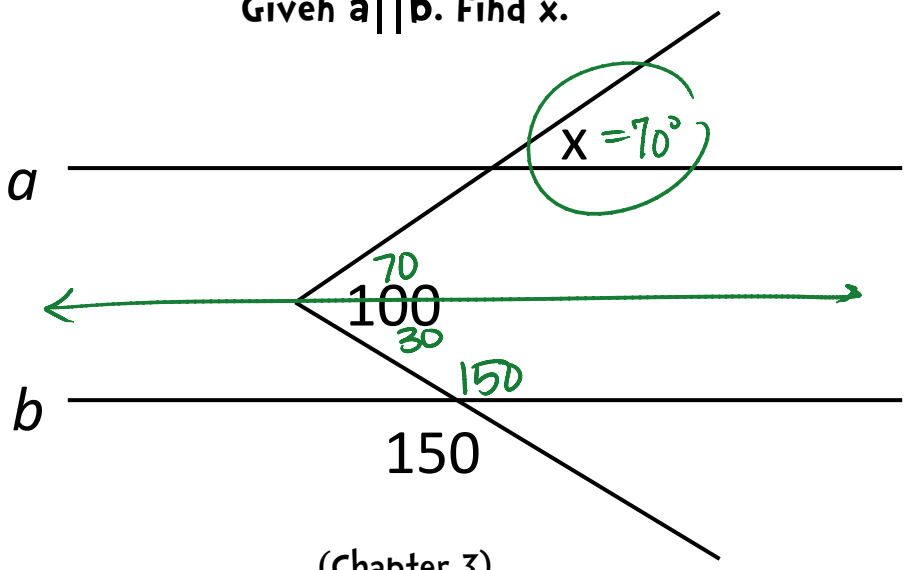
(Chapter 2)

$x = 360 - 2x + 6$
$3x = 366$
$x = 122$

angle $= 122°$
supp $= 180 - 122$
$= 58°$

Station 3

Given a||b. Find x.



(Chapter 3)

Station 4

Are the lines parallel, perpendicular, or neither:

$5x - 4y = 10$ and $5y = -4x + 6$

$-4y = -5x + 10$

$y = \frac{5}{4}x - \frac{5}{2}$

$m = \frac{5}{4}$

$y = -\frac{4}{5}x + \frac{6}{5}$

$m = -\frac{4}{5}$

⊥, since slopes are opposite reciprocals

(Chapter 3)

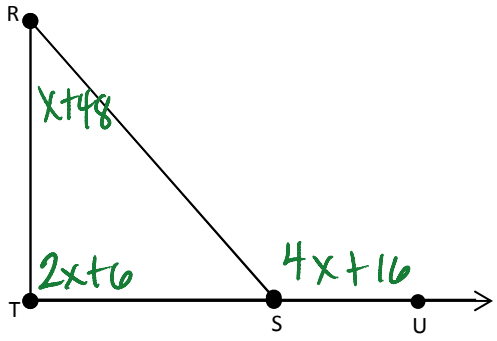
Station 5

Given : $\angle T = (2x+6)^\circ$

$\angle RSU = (4x+16)^\circ$

$\angle R = (x+48)^\circ$

Find: $m\angle T$



(Chapter 4)

$4x+16 = x+48+2x+6$

$4x+16 = 3x+54$

$x = 38$

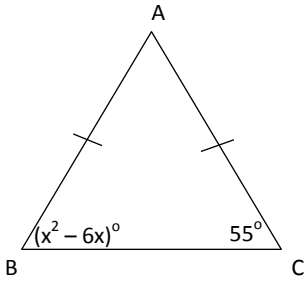
$m\angle T = 2(38)+6$

$= 76+6$

$m\angle T = 82^\circ$

Station 6

Given : $\overline{AB} \cong \overline{AC}$. Solve for x.



(Chapter 4)

$x^2 - 6x = 55$

$x^2 - 6x - 55 = 0$

$(x-11)(x+5) = 0$

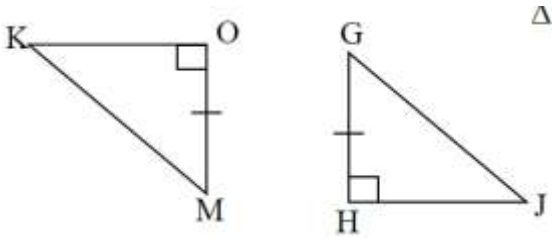
$x = 11 \quad x = -5$

✓ $x = 11$; $(11)^2 - 6(11) = 55^\circ$

✓ $x = -5$; $(-5)^2 - 6(-5) = 55^\circ$

Station 7

Identify the additional pair of corresponding sides or angles needed to support the method for proving triangles congruent.



by SAS $\overline{KO} \cong \overline{JH}$

by ASA $\angle M \cong \angle G$

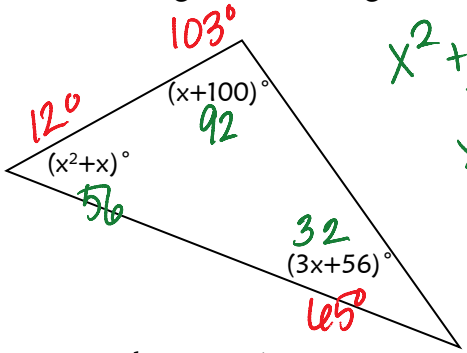
by HL $\overline{Km} \cong \overline{JG}$

Name the congruent triangles: $\triangle OMK \cong \triangle HGJ$

(Chapter 4)

Station 8

Classify the triangle by its angle measures.



$x^2+x+x+100+3x+56=180$

$x^2+5x+156=180$

$x^2+5x-24=0$

$(x+8)(x-3)=0$

$x=-8$ $x=3$

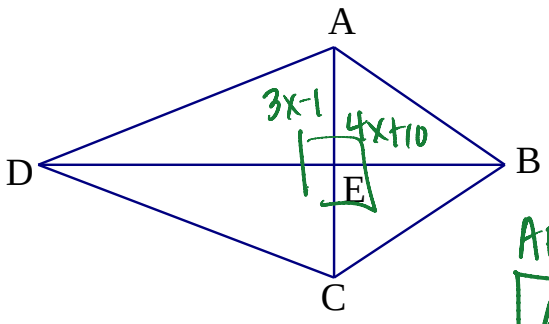
obtuse obtuse

(Chapter 4)

Station 9

Given ABCD is a kite with $\overline{AB} \cong \overline{BC}$.

AE = 3x – 1 and $\angle AEB$ = 4x + 10, what is AC?



$4x+10=90$

$4x=80$

$x=20$

$AE=3(20)-1=59$

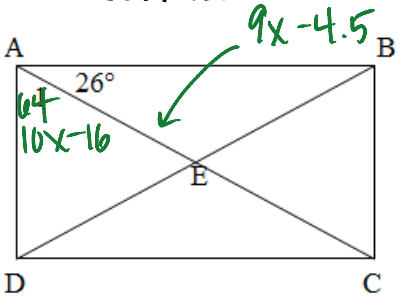
$AC=2(59)=118$

(Chapter 6)

Station 10

Given: ABCD is a rectangle, $\angle 1$ = (10x - 16) and AE = 9x - 4.5

Find: AC.



$10x-16=64$

$+16 \quad +16$

$10x=80$

$x=8$

$AE=9(8)-4.5=67.5$

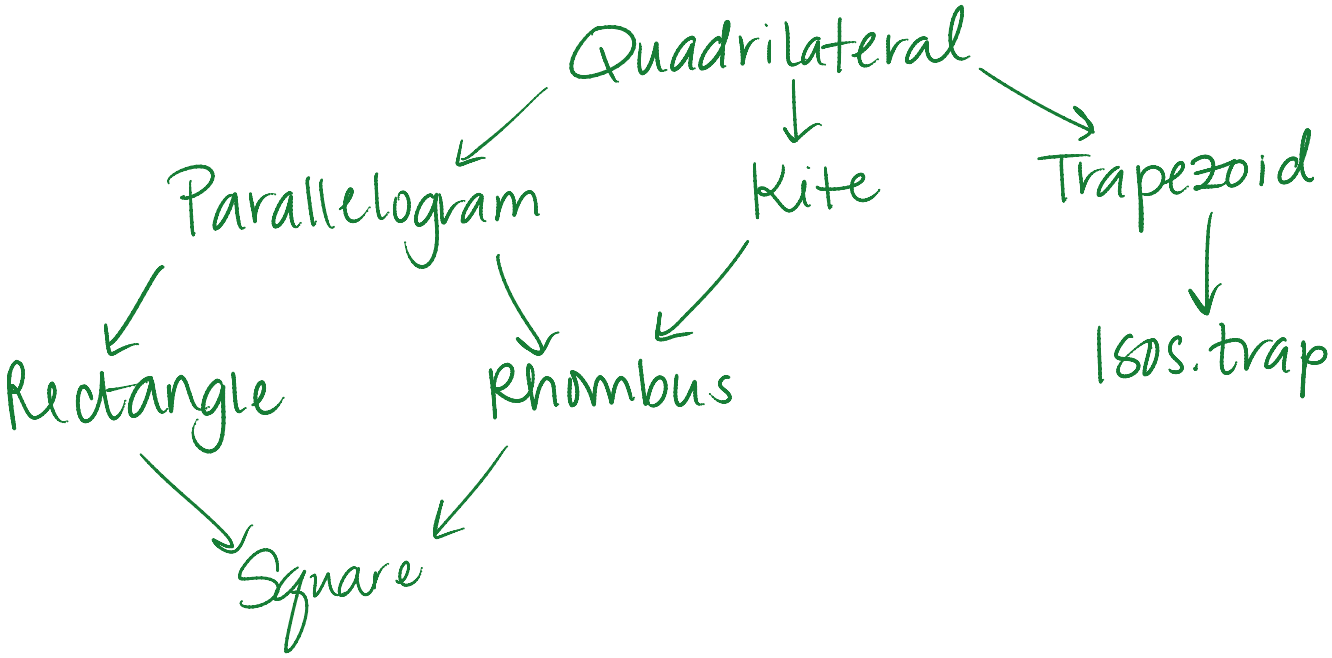
$AC=2(67.5)=135$

(Chapter 6)

Station 11

Draw the quadrilateral tree!

(Chapter 6)



★ Know the Properties!!! ★