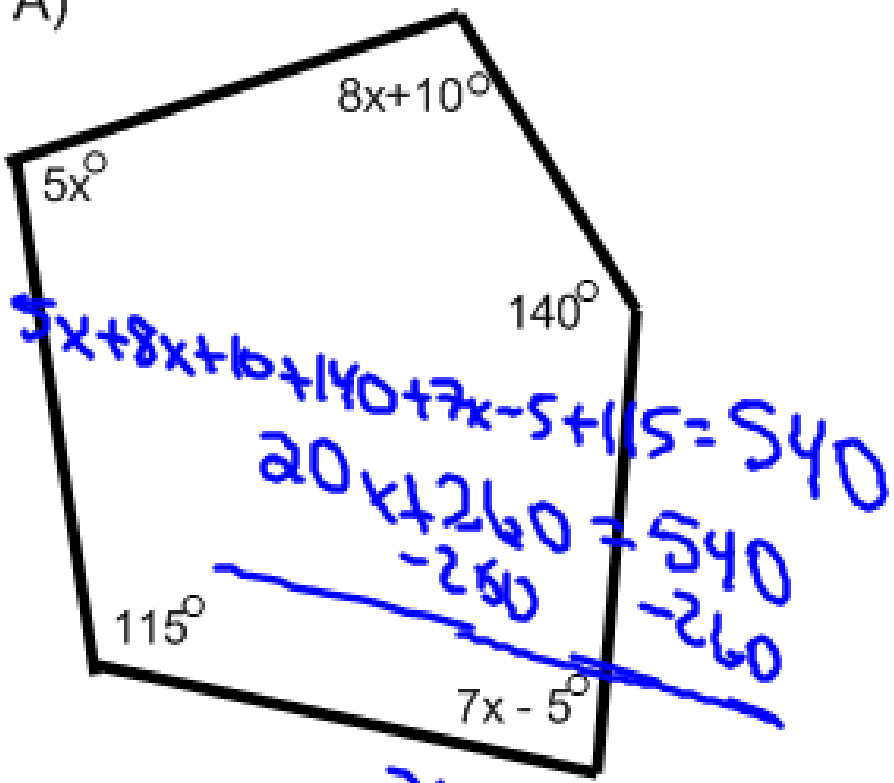
TEST TOMORROW! Warm Up on the problems below by finding the value of x. Have your homework out ready for me to check.

Classwork - Test Review Day 2

A)



$5x+8x+10+140+7x-5+115=540$

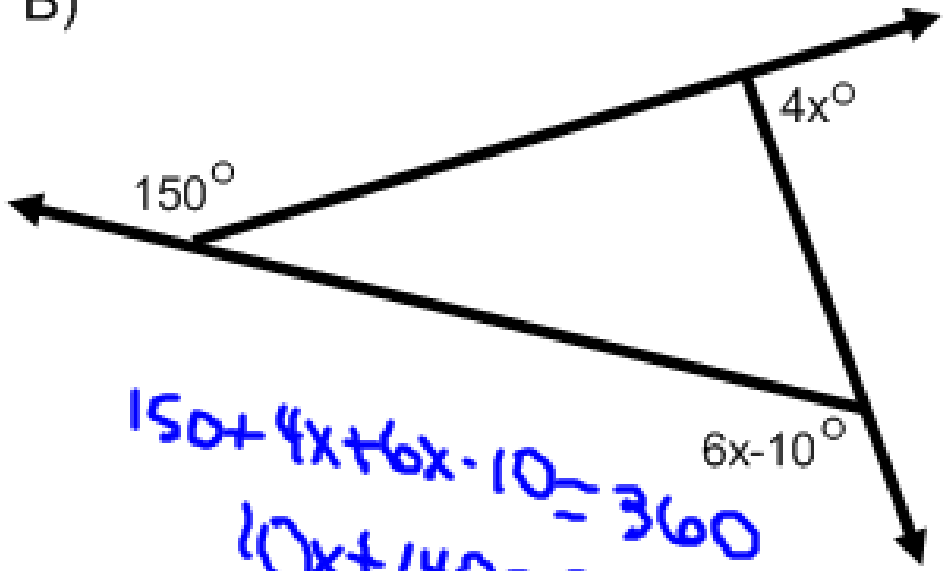
$20x+260=540$

$-260 \quad -260$

$\frac{20x}{2} = \frac{280}{20}$

$x = 14$

B)



$150+4x+6x-10=360$

$10x+140=360$

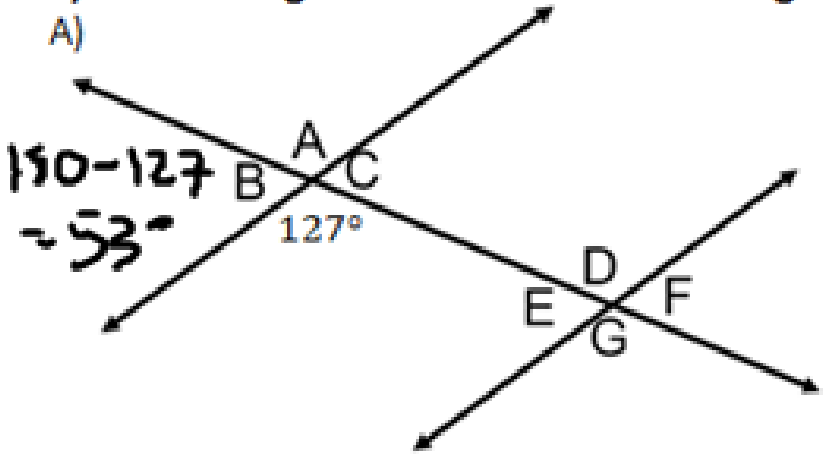
$-140 \quad -140$

$\frac{10x}{10} = \frac{220}{10}$

$x = 22$

1) Find the angle measurement of each angle using the information you are given. LABEL

A)

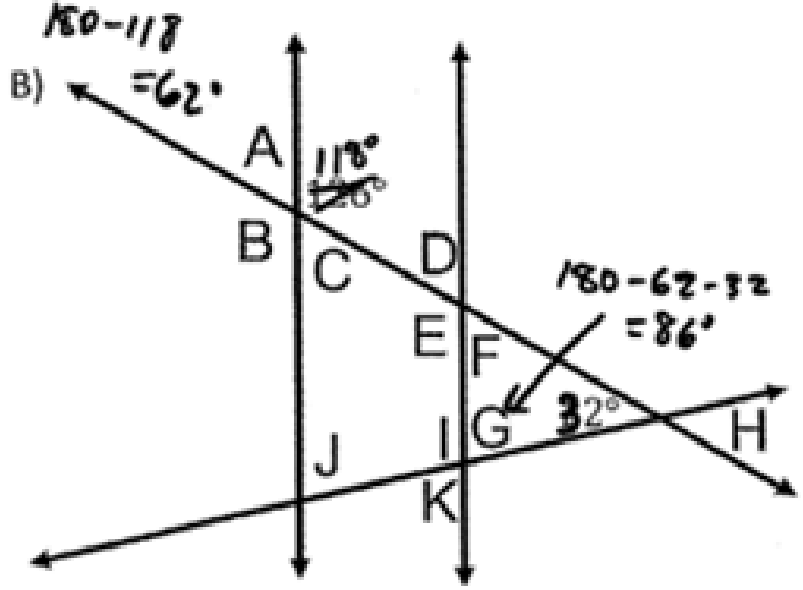


$\angle A =$ 127° $\angle B =$ 53° $\angle C =$ 53°

$\angle D =$ 127° $\angle E =$ 53° $\angle F =$ 53°

$\angle G =$ 127°

B)



$\angle A =$ 62° $\angle B =$ 118° $\angle C =$ 62°

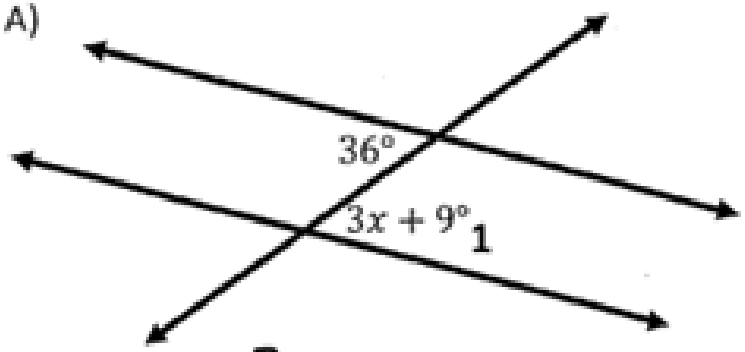
$\angle D =$ 62° $\angle E =$ 118° $\angle F =$ 62°

$\angle G =$ 86° $\angle H =$ 32° $\angle I =$ 94°

$\angle J =$ 86° $\angle K =$ 86°

2) Create an equation to find the value of x and the measure of the missing angle. SHOW WORK AND LABEL.

A)



$3x+9=36$

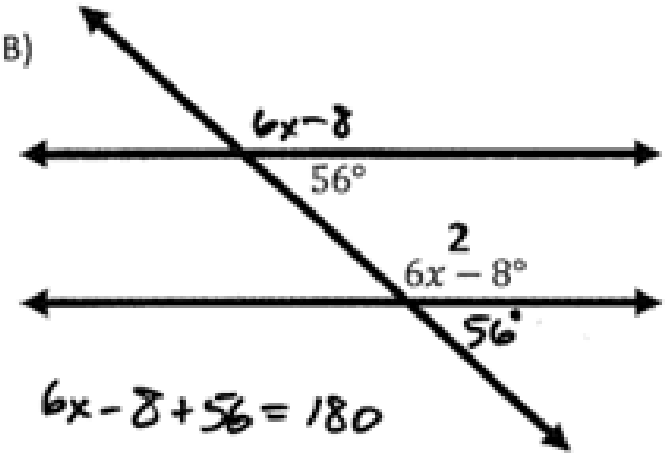
$-9 \quad -9$

$\frac{3x=27}{3 \quad 3}$

$x=9$

$x =$ 9 $\quad \angle 1 =$ 36°

B)



$6x-8+56=180$

$6x+48=180$

$-48 \quad -48$

$\frac{6x=132}{6 \quad 6}$

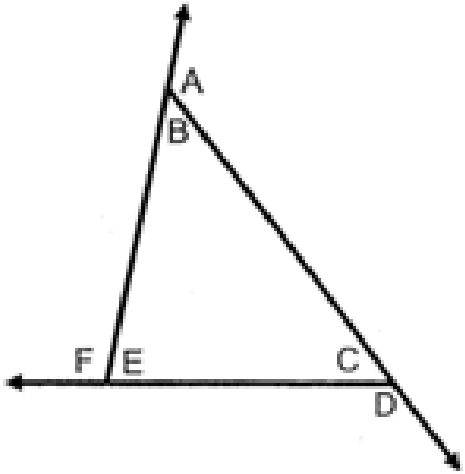
$x=22$

$\angle 2 = 6(22)-8$

$=124°$

$x =$ 22 $\quad \angle 2 =$ 124°

3) Complete the following equations using the figure below and your knowledge of exterior angles of triangles



A) $\angle F = \angle$ B $+ \angle$ C

B) $\angle$ D $= \angle E + \angle B$

C) $\angle A + \angle B =$ 180 ° (Number of degrees)

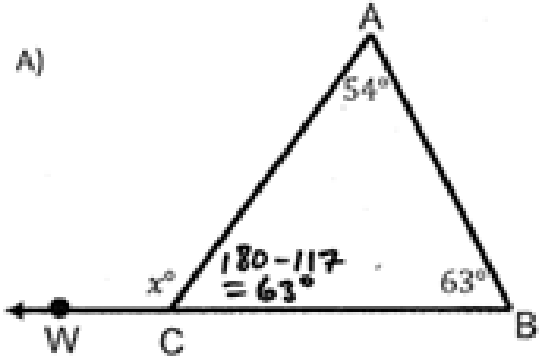
D) $\angle A + \angle D + \angle F =$ 360 ° (Number of degrees)

E) $\angle B + \angle C + \angle E =$ 180 ° (Number of degrees)

F) $180° - \angle D = \angle$ C

4) Create an equation to find the value of x and the measure of the missing angle. SHOW WORK AND LABEL.

A)



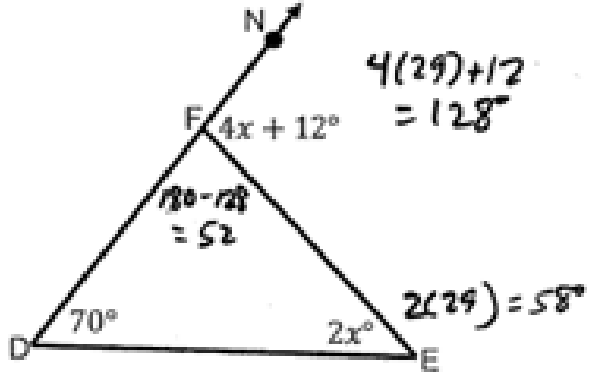
54+63 = x

117 = x

$x =$ 117

$\angle ACW =$ 117° $\angle ACB =$ 63°

B)



2x + 70 = 4x + 12

-12 -12

2x + 58 = 4x

-2x -2x

$\frac{58}{2} = \frac{2x}{2}$ x = 29

$x =$ 29 $\angle EFN =$ 128°

$\angle DEF =$ 58° $\angle DFE =$ 52°

5) Find the following measurements of the following regular polygons.

A) Nonagon $(9-2)\cdot 180$ $(n-2)\cdot 180$

Interior Angle Sum = $1260°$

One Interior Angle = $140°$

Exterior Angle Sum = $360°$

One Exterior Angle = $40°$

B) Pentagon $(5-2)\cdot 180$

Interior Angle Sum = $540°$

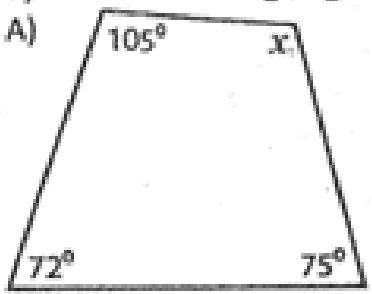
One Interior Angle = $108°$

Exterior Angle Sum = $360°$

One Exterior Angle = $72°$

6) Find the missing angle of each polygon. SHOW WORK AND LABEL

A)



$x + 252 = 360$

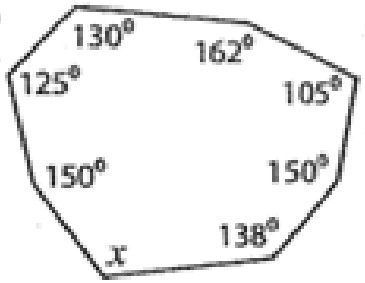
$-252 \quad -252$

$x = 108$

Angle Sum = $360°$

Missing Angle = $108°$

B)



$x + 960 = 1080$

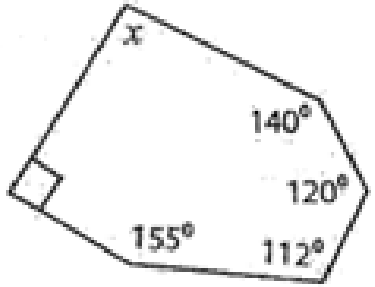
$-960 \quad -960$

$x = 120$

Angle Sum = $1080°$

Missing Angle = $120°$

C)



$x + 617 = 720$

$-617 \quad -617$

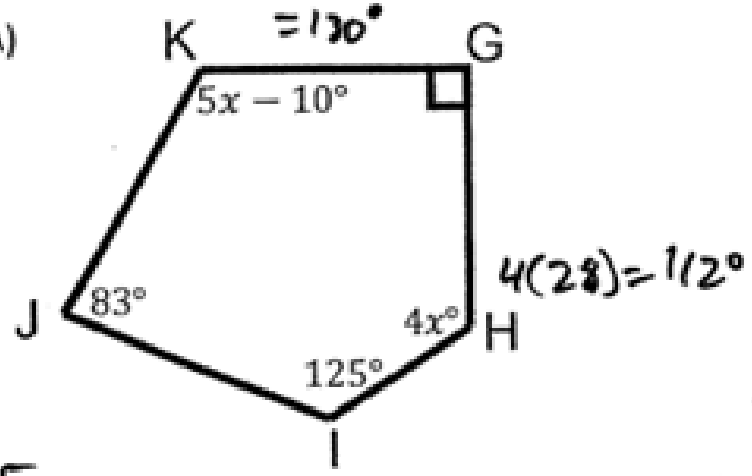
$x = 103$

Angle Sum = $720°$

Missing Angle = $103°$

7) Create and solve an equation to find the value of x and measurement of the missing angles. SHOW WORK

A)



5(28)-10
=130°

4(28)=112°

5x − 10 + 90 + 4x + 125 + 83 = 540

9x + 288 = 540

−288 −288

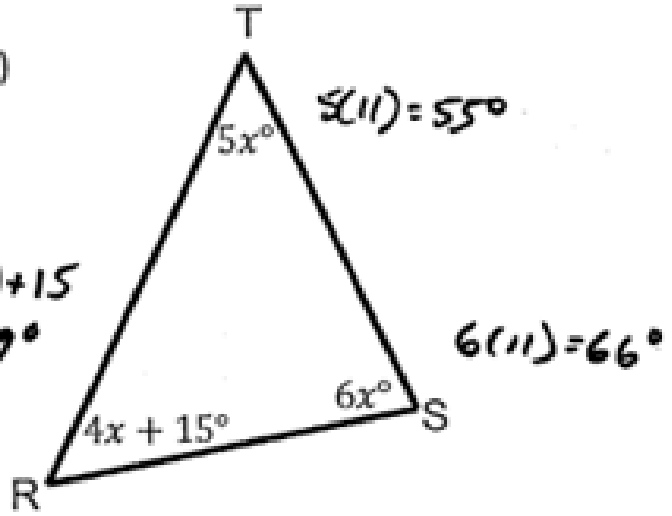
9x = 252

$\frac{9x}{9} = \frac{252}{9}$

x = 28

$x =$ 28 $\angle H =$ 112° $\angle K =$ 130°

B)



5(11) = 55°

4(11)+15
= 59°

6(11)=66°

5x + 6x + 4x + 15 = 180

15x + 15 = 180

−15 −15

15x = 165

$\frac{15x}{15} = \frac{165}{15}$

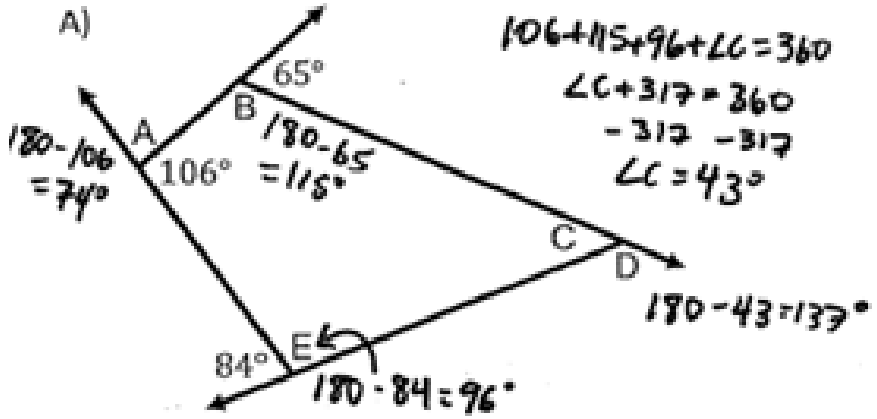
x = 11

$x =$ 11 $\angle R =$ 59°

$\angle S =$ 66° $\angle T =$ 55°

8) Find the measurement of each missing angle. SHOW WORK AND LABEL

A)



180-106 = 74°

180-65 = 115°

106+115+96+∠C = 360

∠C+317 = 360

-317 -317

∠C = 43°

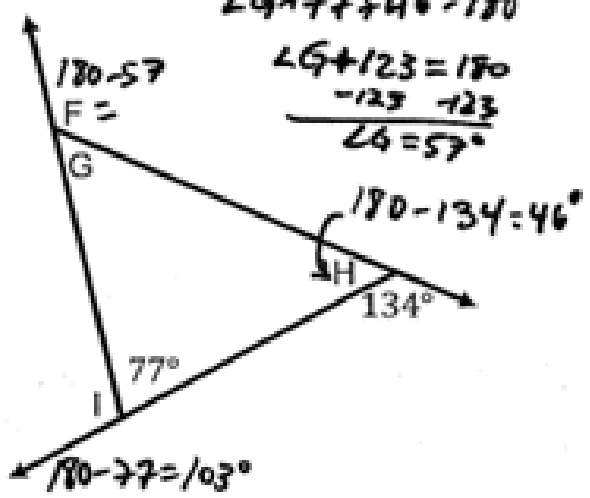
180-43 = 137°

180-84 = 96°

$\angle A =$ 74° $\angle B =$ 115° $\angle C =$ 43°

$\angle D =$ 137° $\angle E =$ 96°

B)



∠4+77+46 = 180

∠4+123 = 180

-123 -123

∠4 = 57°

180-57

180-134 = 46°

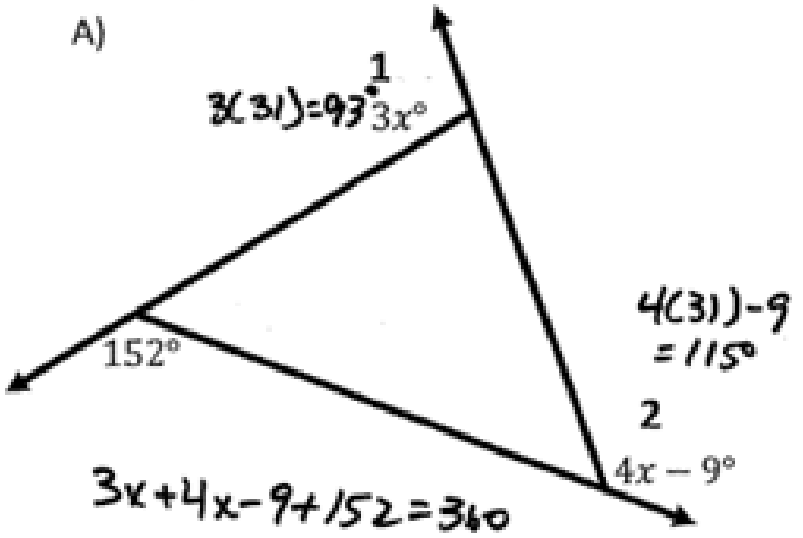
180-77 = 103°

$\angle F =$ 123° $\angle G =$ 57°

$\angle H =$ 46° $\angle I =$ 103°

9) Create and solve an equation to find the value of x and the missing angle of each polygon. SHOW WORK AND LABEL

A)



$3x+4x-9+152=360$

$7x+143=360$

$-143 \quad -143$

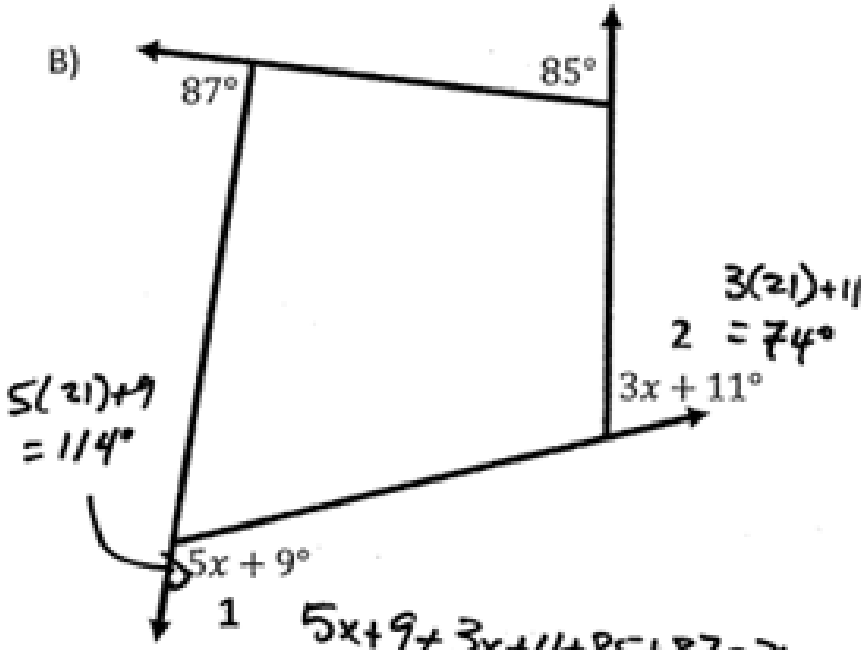
$\frac{7x}{7} = \frac{217}{7}$

$x = 31$

$x =$ 31 $\angle 1 =$ 93°

$\angle 2 =$ 115°

B)



$5x+9+3x+11+85+87=360$

$8x+192=360$

$-192 \quad -192$

$\frac{8x}{8} = \frac{168}{8}$

$x=21$

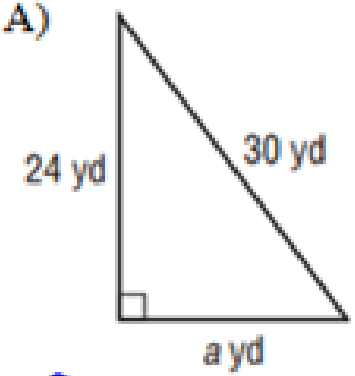
$x =$ 21 $\angle 1 =$ 114°

$\angle 2 =$ 74°

$a^2+b^2=c^2$

1) Use the Pythagorean Theorem to write and solve an equation to find each missing side. Round to the nearest tenth when necessary. SHOW WORK

A)



$a^2+24^2=30^2$

$a^2+576=900$

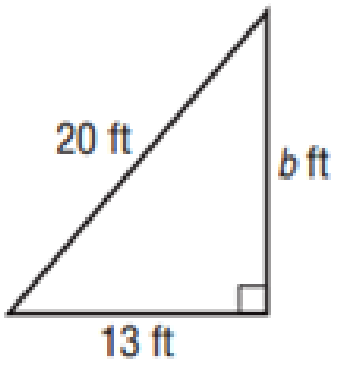
$-576 \quad -576$

$\sqrt{a^2}=\sqrt{324}$

$a = 18$ yd

$a =$ _____

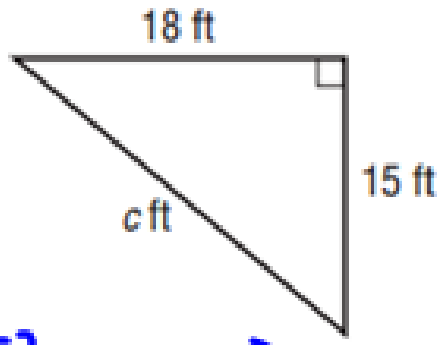
B)



$13^2+b^2=20^2$

$b =$ _____

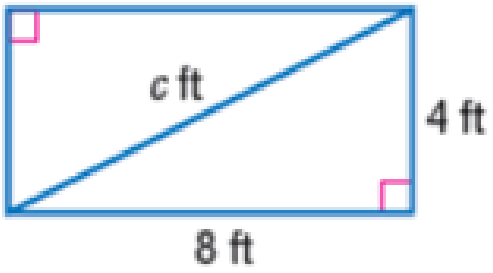
C)



$15^2+18^2=c^2$

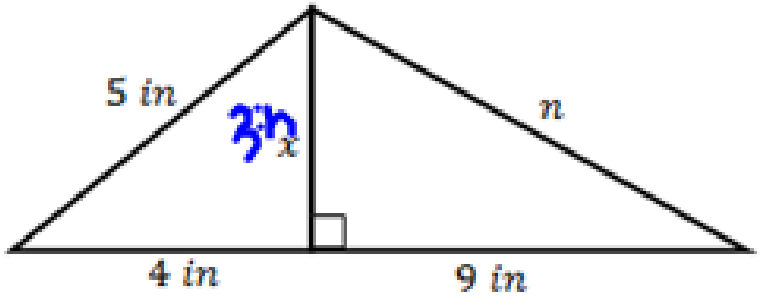
$c =$ _____

D)



$c =$ _____

E)



$4^2 + x^2 = 5^2$

$16 + x^2 = 25$

$-16 \quad -16$

$\sqrt{x^2} = \sqrt{9}$

$x = 3$

$x = 3\text{ in}$

$3^2 + 9^2 = n^2$

$9 + 81 = n^2$

$\sqrt{90} = \sqrt{n^2}$

$9.5 = n$

$n = 9.5\text{ in}$

2) Determine whether each triangle with sides of the given lengths is a right triangle. Justify your answer by showing work.

A) 15 *m*, 8 *m*, 17 *m* YES

$8^2 + 15^2 = 17^2$

$64 + 225 = 289$

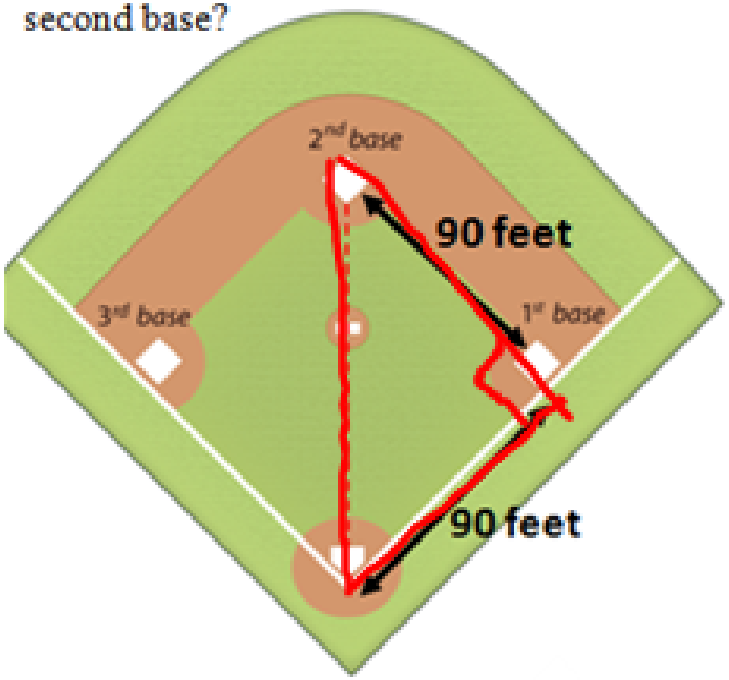
$289 = 289$

B) 9 *yd*, 5 *yd*, 7 *yd*

C) 5 *in.*, 12 *in.*, 13.

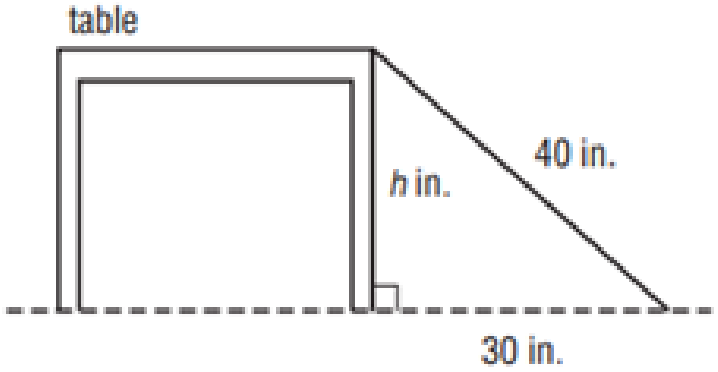
3) Write and solve an equation to answer each question. Round to nearest tenth when needed. SHOW WORK

A) The distance between each base on a baseball field is 90 feet. What is the distance between home plate and second base?



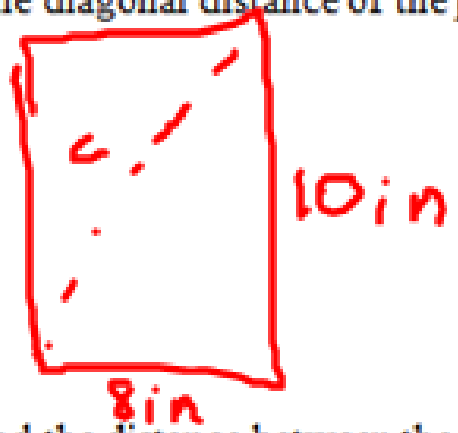
Distance from home plate to 2nd base = _____

B) How tall is the table shown?



h = _____

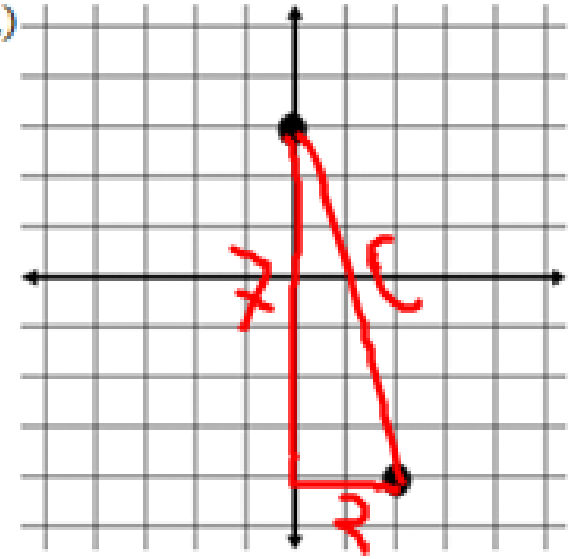
C) Anna is building a rectangular picture frame. The sides of the picture frame are 8 inches and 10 inches. What must the diagonal distance of the picture frame be in order to make sure that the picture frame has right angles?



$8^2 + 10^2 = c^2$

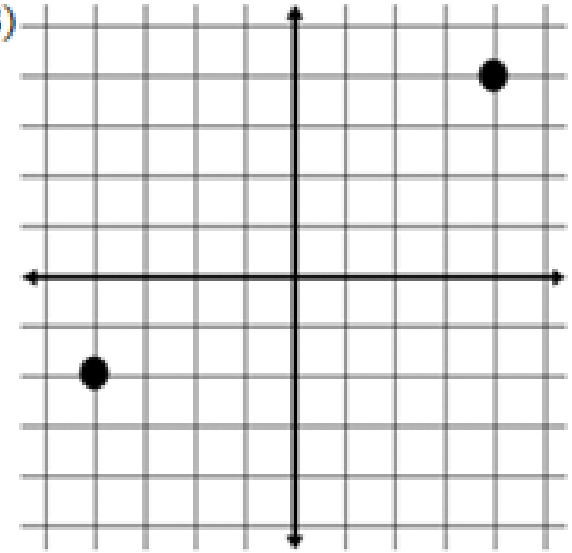
4) Find the distance between the two given points on the coordinate grid by using the Pythagorean Theorem or the distance formula. Round your answer to the nearest hundredth or leave it in radical form. SHOW WORK.

A)



$d =$ _____

B)



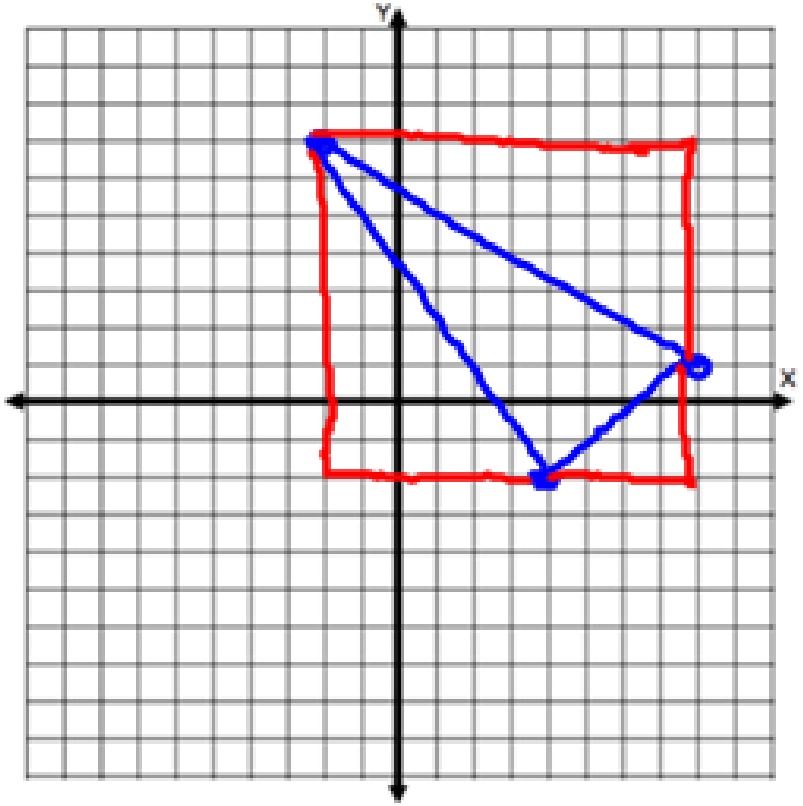
$d =$ _____

5) Graph the following points. Label the points.

Point F $(-2, 7)$ **Point O** $(8, 1)$ **Point X** $(4, -2)$

A) Find the length of each side of the polygon. Round to the nearest tenth when needed.

$\overline{FO}$ = _____ $\overline{OX}$ = _____ $\overline{FX}$ = _____

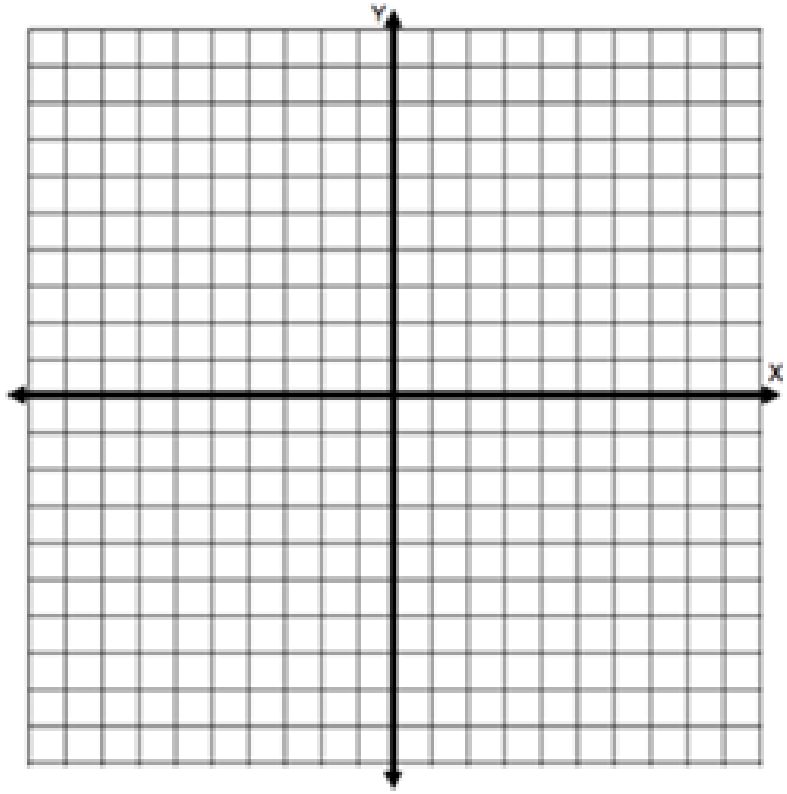


B) Find the perimeter of polygon that the points formed.

6) Graph the following points. Label the points

Point L $(-4,\ 4)$ **Point U** $(2,\ 5)$

Point C $(-1,-3)$ **Point K** $(-7,-4)$



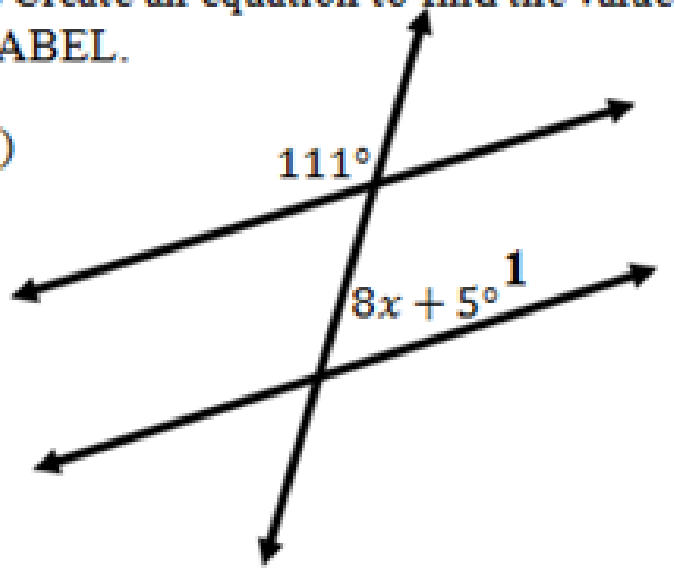
A) Find the length of each side of the polygon. Round to the nearest tenth when needed.

$\overline{LU}$ = _____ $\overline{UC}$ = _____ $\overline{CK}$ = _____ $\overline{LK}$ = _____

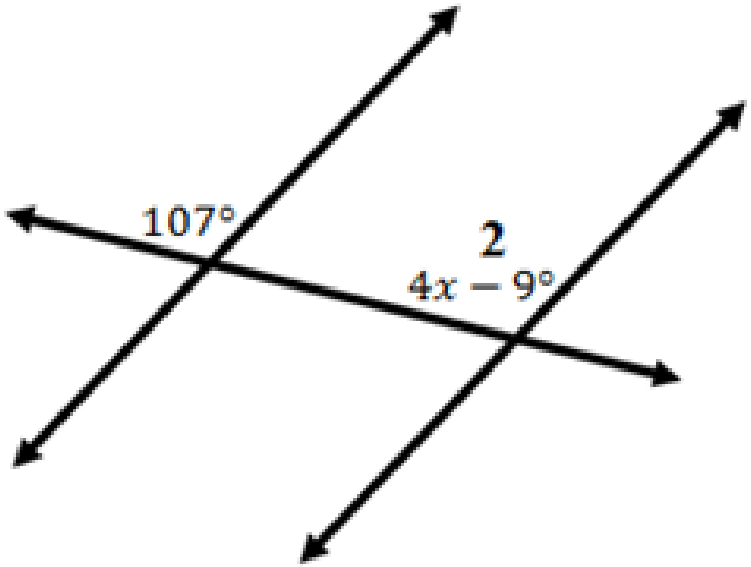
B) Find the perimeter of polygon that the points formed.

7) Create an equation to find the value of x and the measure of the missing angle. SHOW WORK AND LABEL.

A)



B)

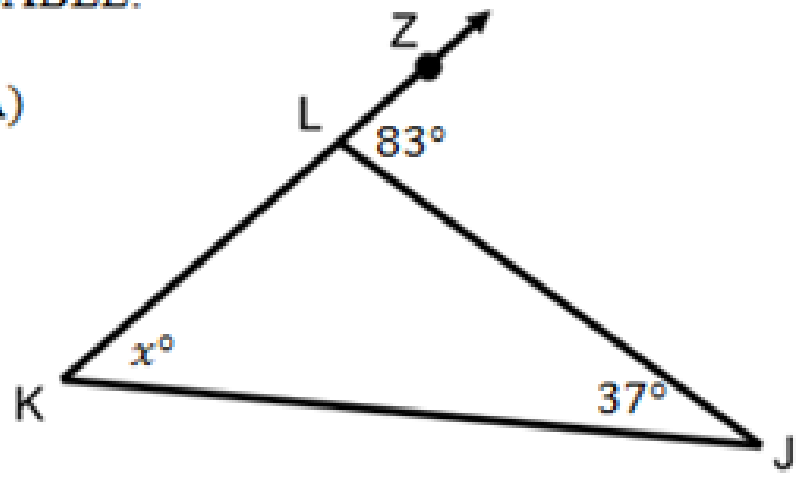


$x =$ _____ $\angle 1 =$ _____

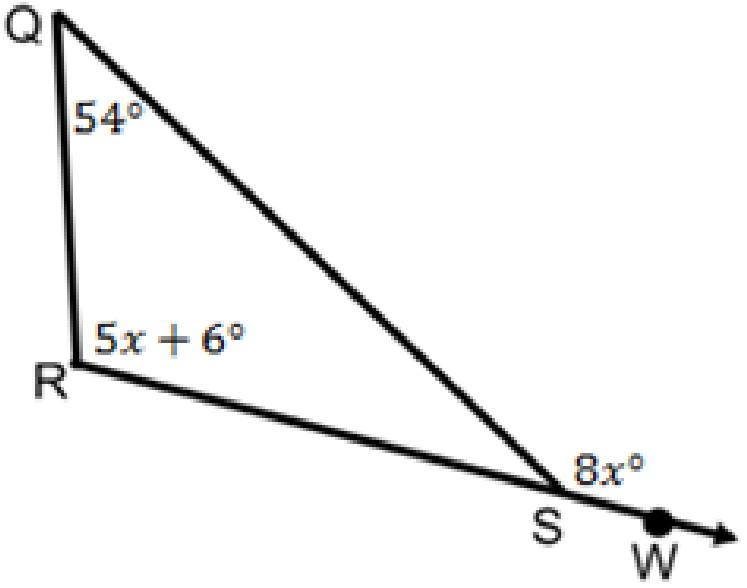
$x =$ _____ $\angle 2 =$ _____

8) Create an equation to find the value of x and the measure of the missing angle. SHOW WORK AND LABEL.

A)



B)



$x =$ _____

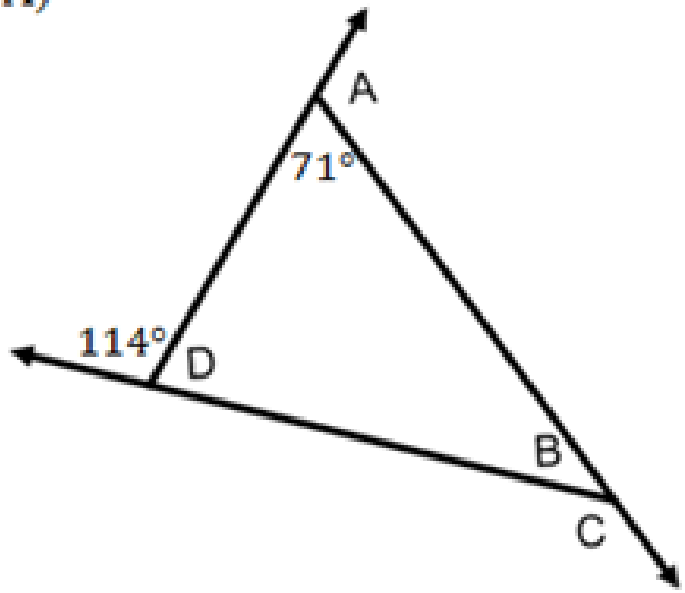
$\angle JKL =$ _____ $\angle JLK =$ _____

$x =$ _____ $\angle EFN =$ _____

$\angle DEF =$ _____ $\angle DFE =$ _____

9) Find the measurement of each missing angle. SHOW WORK AND LABEL

A)



$\angle A =$ _____ $\angle B =$ _____ $\angle C =$ _____ $\angle D =$ _____