

2- Complete the 3 problems.

Station #1
Key

1. Multiple Choice: What is the correct measure of $\angle T$ in the triangle pictured below?

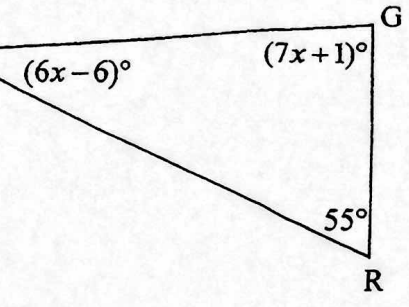
So, $x=10$
 $\angle t = 6x - 6$
 $6(10) - 6$
 $60 - 6$
 54°

A) 10°
 B) 12°
 C) 54°
 D) 71°

$$(6x - 6) + (7x + 1) + 55 = 180$$

$$13x + 50 = 180$$

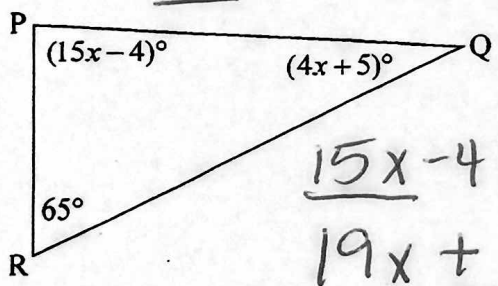
$$\begin{array}{r} 13x + 50 = 180 \\ -50 \quad -50 \\ \hline 13x = 130 \\ \frac{13x}{13} = \frac{130}{13} \\ x = 10 \end{array}$$



2: Determine the measure of $\angle P$ in the triangle pictured below.

So, $x=6$
 $\angle t = 15x - 4$
 $15(6) - 4$
 $90 - 4$
 86°

$$\begin{array}{r} 519 \\ \times 6 \\ \hline 114 \end{array}$$



$$15x - 4 + 4x + 5 + 65 = 180$$

$$19x + 66 = 180$$

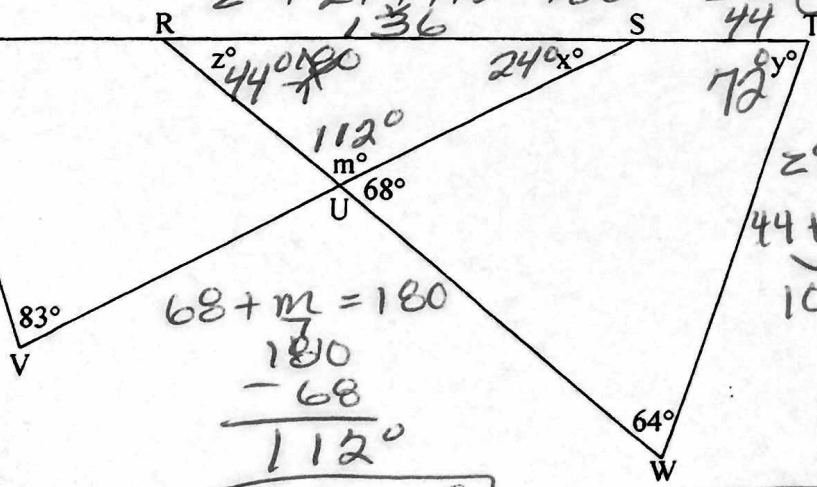
$$\begin{array}{r} 19x + 66 = 180 \\ -66 \quad -66 \\ \hline 19x = 114 \\ \frac{19x}{19} = \frac{114}{19} \\ x = 6 \end{array}$$

3: Determine the measures of all unknown angles in the figure below:

$\angle Q + \angle V + \angle S = 180$

$$\begin{array}{r} 50, \quad 73 \quad 180 \\ +83 \quad -156 \\ \hline 156 \quad 24 \end{array}$$

$x^\circ = 24^\circ$



$$z^\circ + 24 + 112 = 180$$

$$\begin{array}{r} 180 \\ -136 \\ \hline 44 \end{array}$$

$z^\circ = 44^\circ$

$$68 + m = 180$$

$$\begin{array}{r} 180 \\ -68 \\ \hline 112 \end{array}$$

$m^\circ = 112^\circ$

$$z^\circ + y^\circ + 64 = 180$$

$$44 + 64 + y$$

$$108 + y = 180$$

$$\begin{array}{r} 180 \\ -108 \\ \hline 72 \end{array}$$

$y^\circ = 72^\circ$

Station #2

① Describe a series of events that will transform triangle ABC to A'B'C'. Key

Rot 90°
Clock
Translate
right 5

A (-4, -2)	-2, +4	3, 4	A' (3, 4)
B (-8, -7)	-7, +8	-2, 8	B' (-2, 8)
C (-1, -9)	-9, +1	-4, 1	C' (-4, 1)

* Graph both triangles on the coordinate plane then solve. Key

Rotate 90° clockwise

Translate 5 units right

Describe a series of events that will transform rectangle $ABCD$ to rectangle $A'B'C'D'$

$A(4, 2)$	$(-2, 4)$	$(-2, -4)$	$+6$	$-2, 2$	$A'(-2, 2)$
$B(4, 6)$	$(6, 4)$	$(-6, -4)$	$+6$	$-6, 2$	$B'(-6, 2)$
$C(8, 2)$	$(2, 8)$	$(-2, -8)$	$+6$	$-2, -2$	$C'(-2, -2)$
$D(8, 6)$	$(6, 8)$	$(-6, -8)$	$+6$	$-2, -2$	$D'(-6, -2)$

* Graph both rectangles on the coordinate plane then solve.

- Rotate 90° counter clockwise
- Reflect over the x-axis
- Translate up 6 units

Station #3

Changing Shapes - Warm-up

Key

Given Triangle ABC with the coordinates $A(-4, 4)$, $B(4, 4)$, and $C(0, -4)$ in the coordinate plane apply each of the following rules to each coordinate and graph using the appropriate color. Describe how each of the following rules would affect it.

1. $(3x, 3y)$ - Red
2. $(\frac{1}{3}x, \frac{1}{3}y)$ - Green
3. $(x + 3, y)$ - Blue
4. $(x, y - 3)$ - Orange

Ordered pair for each new triangle and a description of what happen to each.

1. $A'(-12, 12)$, $B'(12, 12)$, $C'(0, -12)$ Red
Similar - Enlargement - 300%

2. $A''(-\frac{1}{3}, \frac{1}{3})$, $B''(\frac{1}{3}, \frac{1}{3})$, $C''(0, -\frac{1}{3})$ Green
Similar - Reduction - scale factor $\frac{1}{3}$

3. $A'''(-1, 4)$, $B'''(7, 4)$, $C'''(3, -4)$ Blue
Congruent - Translation - $x + 3$
Translate to right 3

4. $A''''(-4, 1)$, $B''''(4, 1)$, $C''''(0, -7)$ Orange
Congruent - Translation - $y - 3$
Translate down 3

Station # 3
TOP - w/u -

$A(-4, 4)$
 $B(4, 4)$
 $C(0, -4)$

Key
Warm-up

