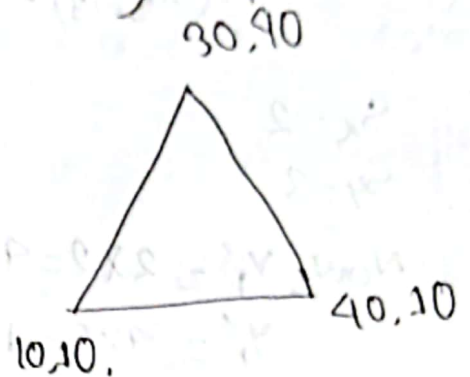Name: Nasinan Leo

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1. Here, $P(10,10)$, $Q(40,10)$, $R(30,90)$

$$\theta = 60° = \frac{60° \times \pi}{180} \text{ rad} = 1.047 \text{ rad}$$

$x_1' = 10 \times \cos(1.047) + 10 \times \sin(1.047)$

$= 13.66$

$y_1' = 10 \times \cos(1.047) - 10 \times \sin(1.047) = -3.657$

$x_2' = 40 \times \cos(1.047) + 10 \times \sin(1.047) = 28.67$

$y_2' = 10 \times \cos(1.047) + -40 \sin(1.047) = -29.64$

$x_3' = 30 \times \cos 1.047 + 40 \times \sin 1.047 = 49.64$

$y_3' = 40 \times \cos 1.047 + -30 \times \sin 1.047 = -5.97$

$S_x = 2$, $S_y = 2$.   7.314

P(27.324, -10.971), Q(57.34, -59.28),

R(99.28, -17.99)

$S_x = 3$, $S_y = 4$,

$\overline{P(}$

$\theta = 90° = 0.01745$

$X_1'' = 28 \times \cos(0.01745) \oplus - 8 \times \sin(0.00745) = 27.86$

$Y_2'' = 8 \times \cos(0.01745) + 28(\cos 0.01745) = 8.98$

$x_2'' = 57.12$

$Y_2'' = 60.24$

$X_3'' = 80.94$

$Y_3'' = 80.55$

3. Transformation means changing some graphics into something else by applying rules. When a transformation takes place on a 2D plane, it is called 2D transformation. Transformation play an important role in computer graphics to reposition the graphics on the screen and change their size or orientation.