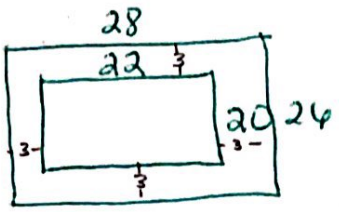
page 1

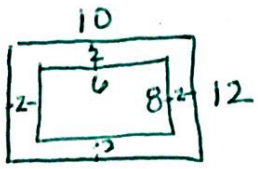
① one slice represents one sector of the circle.
you consumed 1/10 of the pizza

②



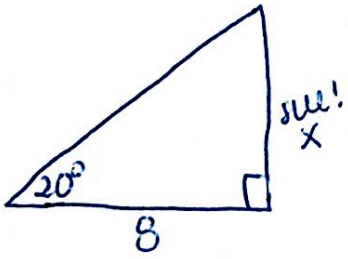
$a = l \cdot w$
$a = 28 \cdot 24$
$a = 728\ ft^2$

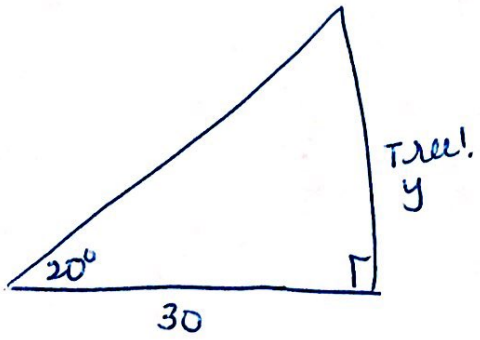
③



$a = l \cdot w$
$a = 6 \cdot 8$
$a = 48\ ft^2$

①





$\tan 20 = \frac{x}{8}$ $\qquad$ $\tan 20 = \frac{y}{30}$

$x = 2.9$ $\qquad$ $y = 10.9$

ⓐ the tree is 10.9 ft tall
sue is 2.9 ft tall → woah!

ⓑ the tree is 8 ft taller than sue

② $V = \frac{1}{3}Bh$

$V = \frac{1}{3}(900 \times 97)$

ⓐ $V = 29{,}100\ ft^3$

ⓑ $29{,}100(.77)$

$22{,}407\ ft^3$

Analytic Geometry – Constructed Response

EOC Pullout – Day 3

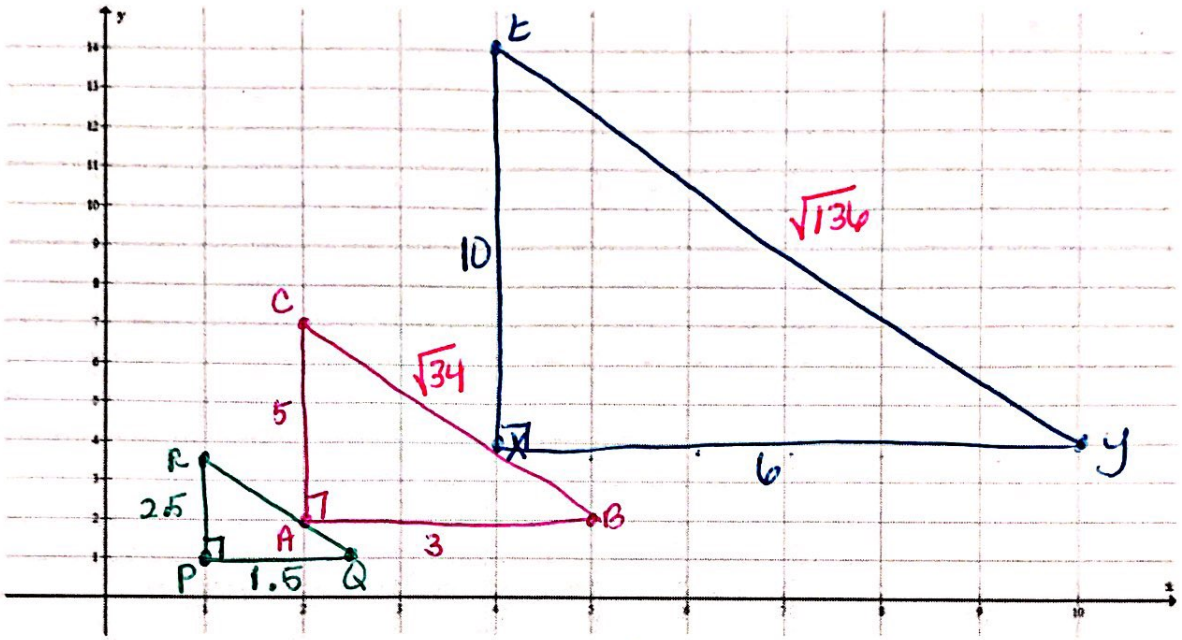
Complete the answers to the given questions on the back of this paper

Plot the following triangles on the graph paper below. Label all vertices.

Triangle ABC: $A(2,2)$, $B(5,2)$, and $C(2,7)$

Triangle XYZ: $X(4,4)$, $Y(10,4)$, and $Z(4,14)$

Triangle PQR: $P(1,1)$, $Q(2.5,1)$, and $R(1,3.5)$



Use your graph as needed to answer the following questions.

#1 $\frac{AC}{XZ} = \frac{5}{10} = \frac{1}{2}$ $\angle A \cong \angle X$

Use your graph as needed to answer the following questions.

$\frac{AB}{XY} = \frac{3}{6} = \frac{1}{2}$ SAS ~

1. Are Triangle ABC and Triangle XYZ similar? Support your statement with evidence.

#2 $\frac{PR}{XZ} = \frac{2.5}{10} = \frac{1}{4}$ $\angle P \cong \angle X$

2. Are Triangle XYZ and Triangle PQR similar? Support your statement with evidence.

$\frac{PQ}{XY} = \frac{1.5}{6} = \frac{1}{4}$ SAS ~

3. Find the sine of $\angle B$ and the sine of $\angle Y$. Write your answers as fractions. What do you notice about the sine values of these two angles? Explain your observation using properties of similarity.

4. Find the cosine of $\angle C$. Write your answer as a fraction. Compare the cosine of $\angle C$ to the sine of $\angle B$. Explain the comparison using properties of similarity or definitions/properties of trigonometric ratios.

#3 sine of $\angle B = \frac{5}{\sqrt{34}} \approx 0.86$

sine of $\angle Y = \frac{10}{\sqrt{136}} \approx 0.86$

B/C sides are proportional, the ratio of $\frac{opp}{hyp}$ will be equal.

#4 cos of $\angle C = \frac{5}{\sqrt{34}} \approx 0.86$

sine of $\angle B = \frac{5}{\sqrt{34}} \approx 0.86$

in a rt $\triangle$, the sine of one complementary $\angle$ will equal the cosine of the other