

Geometry Question #1
March Regional 1999

A secant and a tangent to a circle intersect outside of the circle to form an angle of 38 degrees. If the measures of the intercepted arcs are in the ratio of 1:2, what is the measure of the third arc of the circle?

Geometry Question #2
March Regional 1999

Find the value of $A + B + C$, rounded to the nearest hundredth, if:

A = area of an isosceles trapezoid with sides $5\sqrt{2}$, 10, $5\sqrt{2}$, 20

B = area of a circle containing an inscribed equilateral triangle with perimeter of 6

C = area of a 36° sector of a circle with a diameter of 10

Geometry Question #3
March Regional 1999

Equilateral triangle ABE and square $ABCD$ share \overline{AB} as a common side.
Find the area of the shaded region, to the nearest tenth of a square unit,
if $AB=6$ units.

