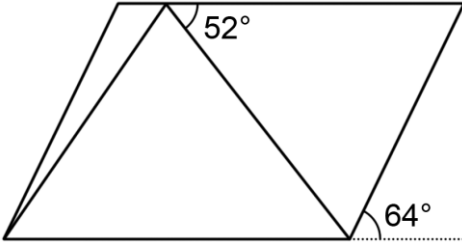
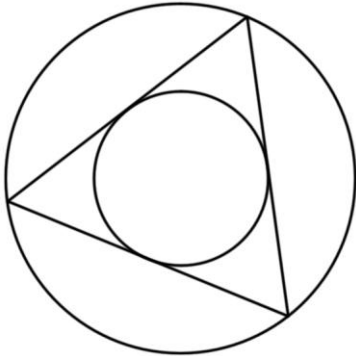
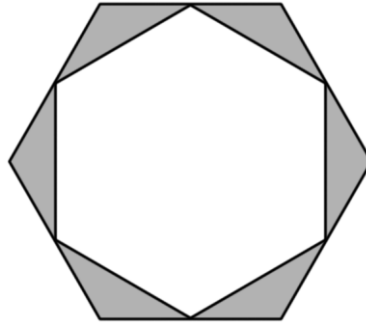




Geometry 7th/8th

1	If a circle has a circumference of 10 feet, what is its area, in square feet?
2	A right triangle has legs of length 5 units and 6 units. What is the length of the hypotenuse?
3	A parallelogram has an area of 10 square meters. If a triangle is drawn inside the parallelogram as shown, what is the area of the triangle, in square meters? 
4	While doodling on her homework, Amy draws a triangle. One side of the triangle measures 7 mm and another side measures 4 mm. If the third side's length in millimeters is a prime number, what is the sum of all possible values of the triangle's perimeter, in millimeters?
5	The longest side of a right isosceles triangle measures 5 inches. What is the area of the triangle, in square inches?
6	An equilateral triangle is inscribed within a circle. Another circle is then inscribed within the triangle. What fraction of the area of the outer circle is contained within the inner circle? 
7	Ben rolls a rhombus down a 50-yard slope. If the rhombus's diagonals measure 12 inches and 16 inches, how many revolutions does the rhombus make? (Assume the rhombus always rolls and never slides.)
8	A cube with a surface area of 42 units is inscribed within a sphere. What is the volume of the sphere?

- 9 A regular hexagon is inscribed within another regular hexagon. Each vertex of the inner hexagon lies on the midpoint of one of the sides of the outer hexagon. If the area of the inner hexagon is 36 square inches, what is the area of the shaded region, in square inches?



- 10 Given that the area under the graph of $f(x)$ from $x = a$ to $x = b$ can be calculated with the definite integral $\int_a^b f(x)dx$, and the volume of the solid produced by revolving the portion of $f(x)$ from $x = a$ to $x = b$ around the x -axis can be calculated with the definite integral $\int_a^b \pi f^2(x)dx$, what is the area of a triangle with height a units and base length b units, in terms of a and b ?