NAME_____DATE_____PER._____

Area Word Problems

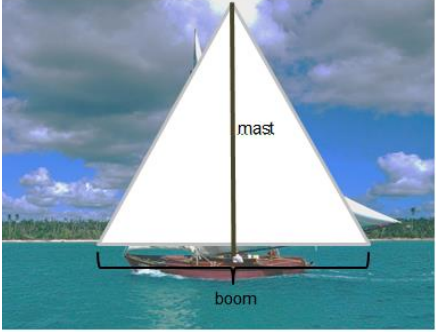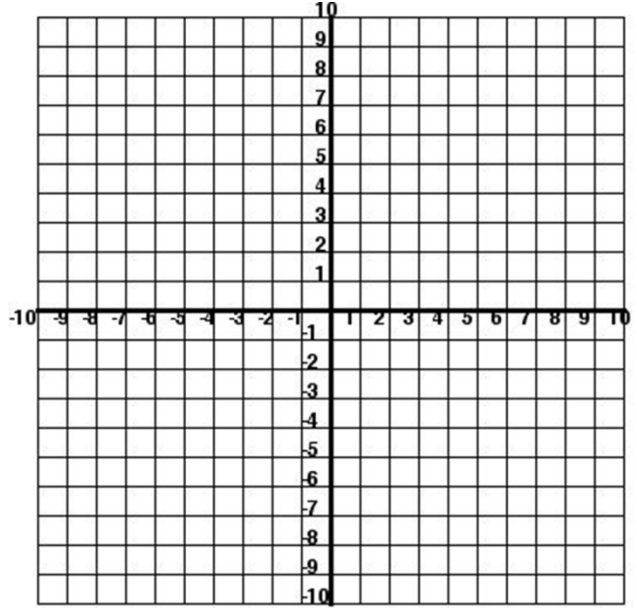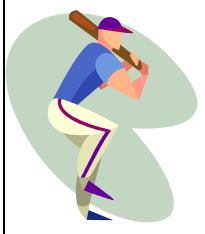|	
_____1.	The boom of a sailboat is 26 feet long. If the sail is an equilateral triangle, how much cloth will be required to make the sail of the boat? Keep your answer exact.
_____2.	When you buy a TV, the size refers to the diagonal. You have an empty square-shaped space in your cabinet that is 2500 in^2. You want to buy a 72-inch Plasma High Definition TV to watch the Super Bowl. Will it fit in your cabinet?
_____3.	Two ships leave port at same time. Ship x is heading due northwest and ship y is heading due east. The path of ship x and ship y makes two sides of what regular polygon? If each side of the regular polygon formed has a length of 200 km, what is its area? Round to the nearest hundredth.

_____4.	Given points A(-1,0), B(1,0), C(0, 1.7) graph the triangle created. What is the area of △ABC? Round to the nearest tenth. Find the measure of angle BAC and determine what type of regular polygon can be formed with C as its center, and $\overline{AB}$ as one of its sides. What is the area of this regular polygon? Round to the nearest tenth.

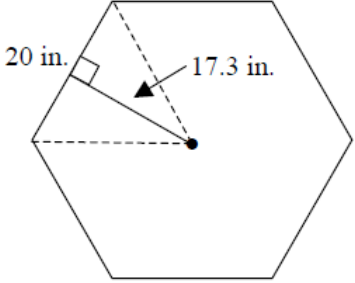(graph grid from -10 to 10 on both axes)

_____5.	Carnival Fun is building an octagonal Ferris wheel with radius 20 feet. They need to buy pipe to go around the perimeter of the Ferris wheel. How many feet of pipe should they buy? Round to the nearest hundredth.

_____6.	A baseball diamond is a square with $45\sqrt{2}$ feet from the pitcher's mound to home. What is the area of the interior of a baseball diamond?

_____7.	The sum of all the sides of a stop sign is 96 inches. A stop sign is an octagon with all sides equal. What is the area of a stop sign? Round to the nearest hundredth.
_____8.	Eva is planting a pentagonal herb garden with thyme, rosemary, basil, sage, and dill. Each herb is planted in a triangular section of the garden and given the same amount of space as the other herbs. The height of the triangular section is 2 feet. If basil has a 4 ft^2 area of space to grow in, how many feet of siding will Eva need to surround her herb garden?
_____9.	What regular polygon can be split into congruent equilateral triangles?
_____10.	If the radius of a regular polygon is 6cm and the side is 7.04 cm, what type of regular polygon is it?

_____11. _____	If the perimeter of a regular pentagon is 55 ft, and each side is represented by 2x+3, Find the value of x and the area of the pentagon.
_____12.	How much glass will need to be cut to make a regular hexagonal window 20 inches on each side for a bathroom window? 20 in. 17.3 in.
_____13.	To get to school, Chad must either walk around a circular lake or canoe across it. The diameter of the lake is 2 miles. How much shorter is his trip if he canoes across the lake rather than walks around it?
_____14.	Kobe can mow a regular hexagonal lawn that is 30 meters on each side in 45 minutes. If he works at the same rate, how many minutes will it take Kobe to mow a square lawn that measures 60 meters on each side?