Unit 6 Review

1. On this coordinate grid, Target is located at point A, the movie theatre is located at point B, and the school is located at point C. Each grid line represents 1 mile. How much farther to the nearest tenth of a mile, is the Target from the school versus Target from the movie theatre?



1. In the diagram below, if a line segment was drawn between points A and B on the graph, the midpoint of the segment would be\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.



1. Parallelogram EFGH has the following coordinates: point E (1,0), point F (3,2),

point G (5,0). Find the coordinates of point H.



1. Find the equation of a line parallel to the line $y=\frac{1}{3}x+2$ that passes through the

point (-3, 3).

1. Find the equation of a line that passes through the point (-1, 6) and is perpendicular to the line $y=\frac{1}{2}x-4$.
2. Using the graph below, write the equation of a line that is parallel to the line shown and passes through the point (-3, 5).



1. Using the graph below, find the equation of a line that is perpendicular to the line shown and passes through the point (2, -3)



1. Determine the area of the given triangle on the coordinate plane.



1. A segment has an endpoint at (4, -1) and a midpoint at (-2, 5). Determine the coordinates of the other endpoint.
2. Which of the following is the most specific classification of quadrilateral QRST with vertices Q(-4, -2), R(-2, -2), S(-1, -4), and T(-4, -4)?



1. Which geometric shapes are in the image?



1.  In the diagram below, given that the points (-2, 3) and (1, -3) are vertices of a rectangle, what are the other two sets of coordinates that could form the other vertices?
2. Mike is building a garden and needs to fence it in to keep the deer out. He has identified where the corners of the garden will be and mapped them on a coordinate plane. Four posts will be placed in the corners and the labeled them as Q(-2, 1), R(3, 1), S(3, 4), T(-2, 4). How many square feet will the garden be?
3. In the diagram below, what is the perimeter of the triangle? Round your answer to the nearest hundredth.



1. Convert the equation below to standard form. x2 + y2 – 8x + 10y = -21
2. Write the equation of the circle graphed below.



1. Consider the equation of a circle, (x + 3)2 + y2 = 49. The center is \_\_\_ and the radius is \_\_.
2. A cone made of steel has radius 14 cm and height 25 cm. If the density of steel is 8.05 g/cm3. What will the cone weigh in grams? Round to the nearest whole number.
3. Graph (x + 3)2 + (y – 1)2 = 4



1. A square pyramid is packaged inside a box. The space inside the box around the pyramid is then filled with protective foam. About how many cubic inches of foam is needed to fill the space around the pyramid?



4 cm

4 cm

4 cm