Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Geometry Period \_\_\_\_\_

Chapter 10: Area Project

1. A garden is in the shape of a semicircle with a diameter of 40m. What is the **area** of the garden? Make sure to draw and label the shape. **(1 Point)**

1. A craft project requires the covering of just a portion of a round lid with a strip of material. The diagram below shows a darkened arc that would represent the strip. The diagram shows a circle with center O and radius 42 inches. A and B are points on the circumference such that arc AB makes an angle of 120°. Calculate the **length** of the required strip of cloth. **(1 Point)**
![[image]]()
2. A gardener needs enough potting soil to cover a certain section of ground. The darkened sector of the diagram below shows the area that the gardener needs to cover. The diagram shows a circle with center O and radius 42 feet. A and B are points on the circumference such that arc AB makes an angle of 120° at O. Calculate the **area** that needs to be covered with potting soil. **(1 Point)**
![[image]]()

42 ft

1. The children’s’ merry-go-round needs a new coat of paint. The darkened segment below represents the portion that will be painted yellow. The diagram shows a circle with center O and radius 10 ft. A and B are points on the circumference such that arc AB makes an angle of 150° at O. Calculate the **area** that will need to be painted white. **(1 Point)**

![[image]]()

10 ft

1. A piece of metal stripping will be used to outline a craftsman’s workbench. The workbench has a shape made of a square and a semicircle. Find the **perimeter** of the shape so that we can find out how much metal stripping is needed? **(1 Point)**
![[image]]()

7 m

7 m

7 m

1. A carpenter is creating the design below as an ornament. The shape is made up of four quarter-circular arcs, each of radius 5 inches, joined together. Label the figure below. The shape will need to be covered with fabric. Find the **area** of the shape so that we can find out how much fabric is needed? **(1 Point)**
![[image]]()
2. A metal tool consists of a semicircle and a triangle joined together. What **area** of metal is needed to make the tool? **(1 Point)**
![[image]]()
3. Crown molding need to be installed in a uniquely shaped room. The shape below represents the ceiling of the room. It is a square with two quarter circles cut from opposite corners. Label some of the missing measurements. Find the **perimeter** of the shape so that you can determine how much of the crown molding you would need. **(1 Point)**

16 ft

![[image]]()

23 ft