

Circumference and Area of Circles

NAME:

Grade Seven

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1. Search **three** different circular objects that have also different sizes in or around your home. It is an individual work.
2. Find the centre of the each circular object with compass and straightedge or ruler on a paper.
 - ➔ Decide whether objects are really circles or not. If they are, draw them in your poster, name and paint them.
 - ➔ Show your all works on the poster.

3. Measure and state the radius of the each circle.
Measure and state the diameter of the each circle.

4. Now estimate the circumference of three circles without using formula. State on your poster how to do the estimation.

! When you divide the circumference by the diameter for each circle, you will get nearly Pi (π) which has lots of approximation such as 3.14, 3 or 22/7. Check your results.

- ➔ Create a table that includes name of objects, radius of circles, and your estimate of the circumference (in cm)
 - ➔ Is there any pattern that you observe from the table? What could be the general formula including Pi?
5. You will also estimate the area of each three circle without using formula.
 - ➔ Create a second table that includes name of objects, radius of circles, and your estimate of the area. (in cm^2)
 - ➔ Is there any pattern that you observe from the table? What could be the general formula including Pi?
 6. Write on the poster about what you learned when you work on this project.

Rubric for Circumference and Area of Circles

Points	1-2pts	3-4pts	5-6pts	7pts
Finding Centre of a circle	Some constructions and measurements are missing. Centre of some circles is not found. Works are not stated. Linear measures are not stated.	Constructions and measurements are not accurate. Centre of one circle is just found. Works are not stated clearly. Linear measures are not stated.	Constructions and measurements are accurate. Centre of each circle is found. Works are stated clearly. Linear measures are not stated.	Accurate constructions and measurements. Centre of each circle is found. Works are stated clearly. Linear measures are stated.
Circumference of a circle	Estimations of circumferences are not coherent. Circumference of some circles is not estimated and results are not stated clearly. Not Worked on general formula. Linear measures are not stated.	Estimations of circumferences are coherent. Some results are missing. Worked on general formula. Linear measures are not stated.	Estimations of circumferences are coherent. Circumference of each circle is not estimated and results are clearly stated. Worked on general formula. Linear measures are not stated.	Estimations of circumferences are coherent. Circumference of each circle is estimated and results are clearly stated. Worked on general formula. Linear measures are stated.
Area of a circle	Estimations of areas are not coherent. Area of some circle is not estimated and results are not stated clearly. Not worked on general formula. Area measures are not stated.	Estimations of areas are coherent. Some results are missing. Worked on general formula. Area measures are not stated.	Estimations of areas are coherent. Area of each circle is not estimated and results are clearly stated. Worked on general formula. Area measures are not stated.	Estimations of areas are coherent. Area of each circle is estimated and results are clearly stated. Worked on general formula. Area measures are stated.
Reflection	Reflection includes one or two sentences	Reflection includes more than two sentences clearly (3-4pts)		
Poster	Poster has some components on it. poor presentation(1pts) Poster has all components and they are labelled it. Good presentation. (2pts)	Poster has all components and they are clearly labelled. Excellent presentation(3pts)		