

Math 9A LG 16

Circle Geometry



INTRODUCTION:

Circles are found everywhere, and they tend to pose problems for many people when it comes to design and structure. An architect will always find difficulty trying to place a round window, or arch inside a square structure. In the same way a graphic designer has troubles trying to place legible writing on the outside of a can or bottle. To become good at solving these types of problems both of these individuals had to spend some time discovering the properties of circles.



LEARNING GUIDE EXPECTATIONS:

On the completion of this learning guide you will be able to:

- 1) Using the **Circle Geometry Handout**, create a series of rules for the properties of a circle.
- 2) Including one word problem of your own design, develop a 10 question quiz with answers that will demonstrate your understanding of the rules involved in **Circle Geometry**.
- 3) Solve problems involving **Circles**.



EVALUATION:

You are ready to progress to the next learning guide when you can demonstrate your understanding of the above expectations. Please refer to your Mathematics 9A Marks Record Sheet to determine the assessment.



RESOURCES NEEDED:



Math Links 9 Text



Math 9 Circle Geometry Handout (available at the Science Kiosk)



Geometry Set including a ruler, compass and protractor

LEARNING ACTIVITIES:



Expectation #1: Using the Circle Geometry Handout, create a series of rules for the properties of a circle.



1. Complete all of the activities in the Circle Geometry Handout which is available at the Science Kiosk (you will need a geometry set).

2. In the Math Links 9 text, take notes on Chapter 10. Anything written inside a purple or blue box should be included in these notes.



3. Read Key Ideas on page 382, 388, and 399. In your math journal, condense all of the material you have gathered on Circle Properties into 6 rules.



Expectation #2: Including one word problem of your own design, develop a 10 question quiz with answers that will demonstrate your understanding of the rules involved in Circle Geometry.



1. In the Math Links 9 text, work through Examples 1, 2 & 3 on pages 379-381. Now complete #3, 6, 8, 10 & 13 on pages 382-383.

2. In the Math Links 9 text, work through Examples 1 & 2 on pages 387-388. Now complete #4, 6, 7, 10 & 15 on pages 389-392.

3. In the Math Links 9 text, work through Examples 1, 2 & 3 on pages 395-398. Now complete #3, 5, 7 on pages 399-402.



4. Make 2 copies of your quiz, one for the journal and one to hand in for Expectation 3.



Expectation #3: Solve problems involving Circles.



1. In the Math Links 9 text, complete the following questions #4, 7, 11 on pages 382-385.

2. In the Math Links 9 text, complete the following questions #5, 8, 9 on pages 389-392.

3. In the Math Links 9 text, complete the following questions #4, 6, 8 on pages 399-403.

REVIEW AND CHALLENGE



1. In the Math Links 9 text, complete Chapter Review #1 to 5, 8, 10, 13, 15, 17 and 19 on pages 404-405.