Tuesday, Feb. 26th, 2019

2.4 - Equation of a Circle

Learning Goals:
- Use the equation of a circle to capture the coordinates defined by the circle

Success Criteria:
- Relate the radius of a circle centered at (0,0) with the equation
- Understand the link between the Pythagorean theorem with the equation of a circle.

Recall what the equation of a line does, it describes the relationship between two variables and captures all ordered pairs that satisfy this relationship.

\[ y = mx + b \]

\[
\begin{array}{c|c}
 x & y \\
 3 & 9 \\
 4 & 11 \\
 5 & 13 \\
\end{array}
\]

Let us consider a circle centered at the origin (0,0).
$a^2 + b^2 = c^2$

$\boxed{x^2 + y^2 = r^2}$  

**The Equation of a Circle Centered at (0,0)**

**IX. What is the equation of a circle centered at (0,0) with a radius of:**

- a) 3  \(x^2 + y^2 = 9\)
- b) 7  \(x^2 + y^2 = 49\)
- c) \(\sqrt{23}\)  \(x^2 + y^2 = 23\)

**HMWK**

- L1: pg 96-97 # 1ace, 2ace, 3ac, 4ace
- L2: pg 97-98 # 5, 8, 9, 13
- L3: pg 98-99 # 18, 19, 25, 26