***Technology Tools for Secondary Mathematics***

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ArmBot - Cartesian and Polar Coordinates

**Minnesota State Standard:**

Benchmark: 9.3.2.5 Technology Tools

Use technology tools to examine theorems, make and test conjectures, perform constructions and develop mathematical reasoning skills in multi-step problems. The tools may include compass and straight edge, dynamic geometry software, design software or Internet applets.

**Cartesian Coordinate System**

**Polar Coordinate System**

(x, y)

(r, θ)



**Helpful Equations:**

**Unit Circle**

**Squares’ Coordinates - Cartesian:**

* Green: (0 , 210)
* Blue: (103.48 , 159.35)
* Red: (-138.96 , 129.58)
* Orange: (-145.01 , 67.62)

**Practice:**

* Convert from Cartesian coordinates to polar coordinates: (-138.96 , 129.58)

* Convert from polar coordinates to Cartesian coordinates: (160, 155°)