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A KING?



## Future Kings™ Education Program

Subject: Math  
Level 1 (Prince)

# Math

## Level 1 - Prince



# Summary

Area of focus: angles

Topics covered:

- Parts of an angle
- Labeling angles
- Types of angles

Suggested time to complete (2 hrs):

- Teaching material (40 minutes)
- Practice activity (20 minutes)
- Final project (60 minutes)

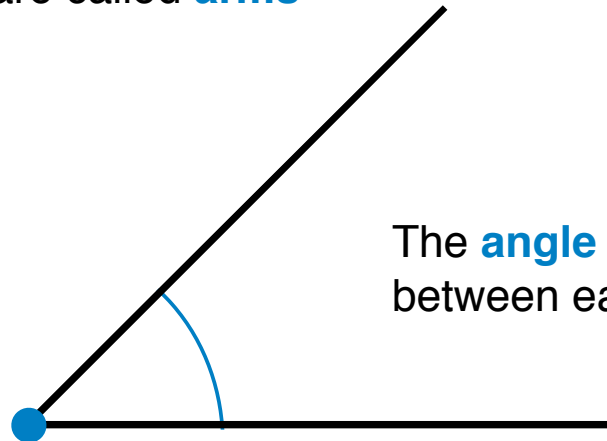


# Parts of an Angle

The two straight sides are called **arms**

The **angle** is the amount of rotation between each arm

The corner point of an angle is called the **vertex**

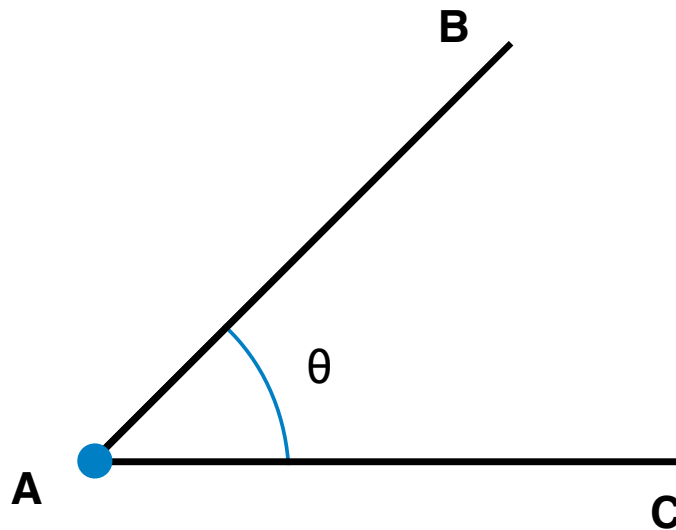


# Labeling Angles

There are two main ways to label angles:

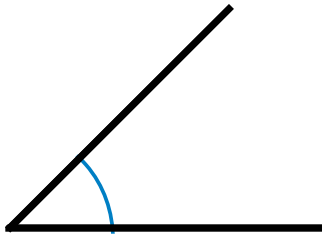
1. by using a lower-case letter like **a** or **b**, or a Greek letter like  **$\alpha$**  (alpha) or  **$\theta$**  (theta)
2. or by using three letters. The first and third letters represent points on each of the arms that form one of the sides. The middle letter represents the vertex.

The example angle can be labeled as “ $\theta$ ”, “BAC”, or “CAB”



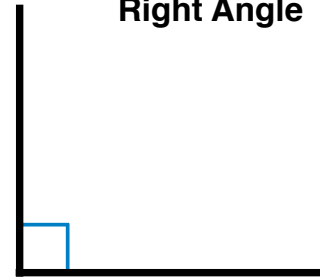
# Types of Angles

**Acute Angle**



Definition: an angle that is less than  $90^\circ$

**Right Angle**



Definition: an angle that is exactly  $90^\circ$

**Straight Angle**

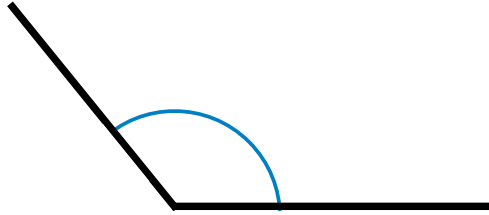


Definition: an angle that is exactly  $180^\circ$



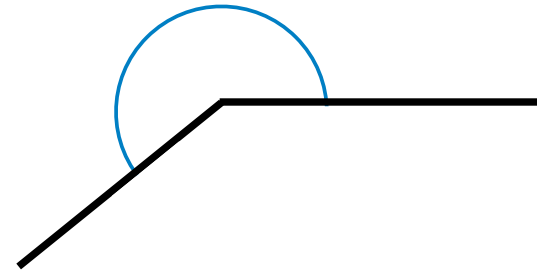
# Types of Angles

**Obtuse Angle**



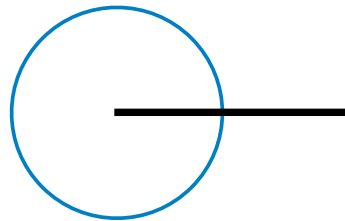
Definition: an angle that is greater than  $90^\circ$  but less than  $180^\circ$

**Reflex Angle**



Definition: an angle that is greater than  $180^\circ$

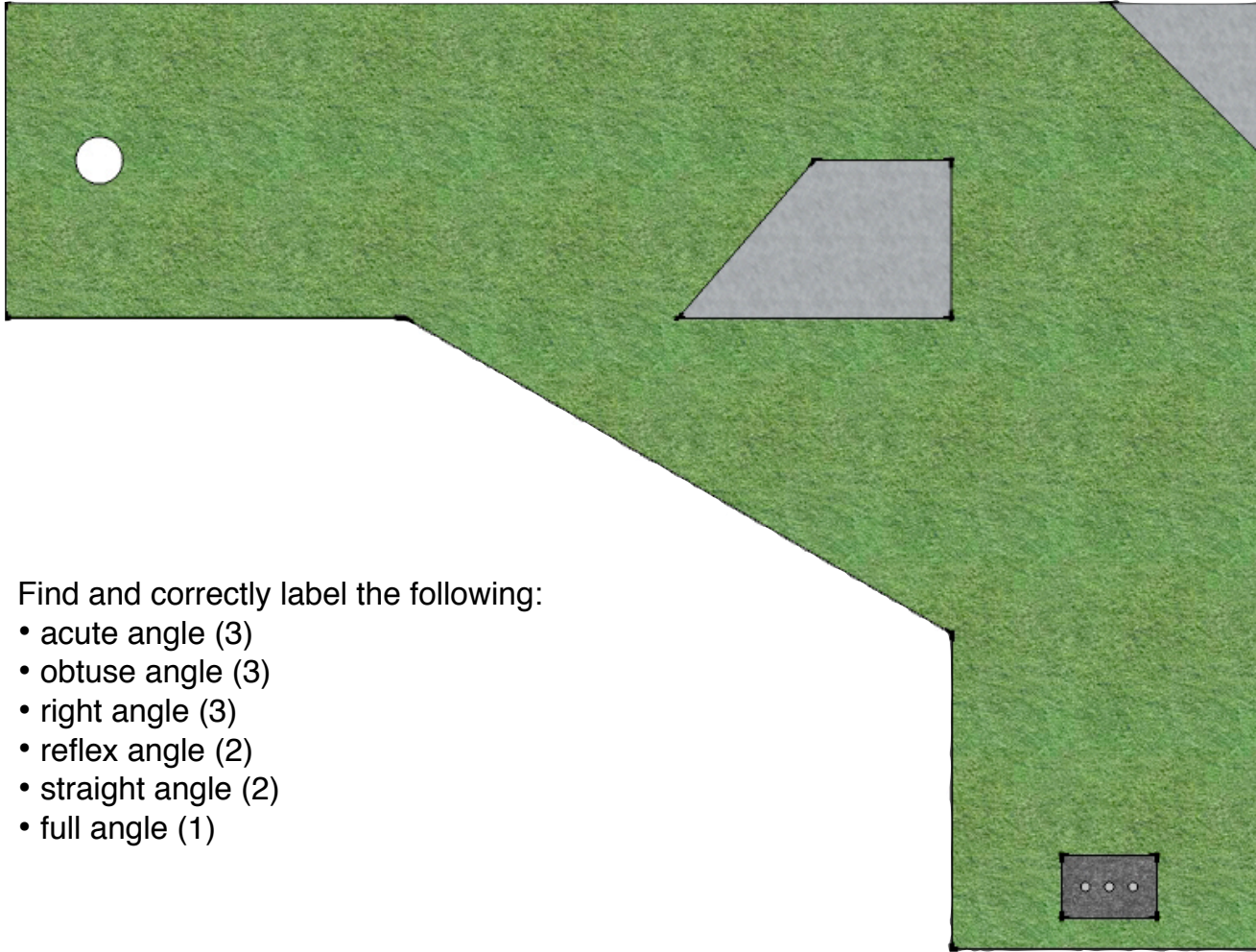
**Full Angle (Perigon)**



Definition: an angle that is exactly  $360^\circ$



# Practice Activity



Find and correctly label the following:

- acute angle (3)
- obtuse angle (3)
- right angle (3)
- reflex angle (2)
- straight angle (2)
- full angle (1)





# Final Project

## Requirements

Design and label a miniature golf hole that includes at least:

- 1 acute angle
- 3 obtuse angles
- 2 right angles
- 1 reflex angle
- 2 straight angles
- 1 full angle

For full points, be sure to:

- label at least one vertex
- use a protractor to accurately measure and label the rotation amount for 1 acute angle and 1 obtuse angle
- be creative!



# Grading Rubric

	<b>Bogey</b> (70% - 79%)	<b>Par</b> (80% - 89%)	<b>Birdie</b> (90% - 100%)
<b>Angles</b>	<ul style="list-style-type: none"> <li>• Student did not include all required angles</li> <li>• Student incorrectly measured both angles</li> </ul>	<ul style="list-style-type: none"> <li>• Student forgot to include a required angle</li> <li>• Student incorrectly measured an angle</li> </ul>	<ul style="list-style-type: none"> <li>• Student included all required angles</li> <li>• Student correctly measured at least two angles (one acute and one obtuse) using a protractor</li> </ul>
<b>Labels</b>	<ul style="list-style-type: none"> <li>• Student incorrectly labeled more than one angle</li> <li>• Student incorrectly labeled the degrees of rotation for at least one angle</li> </ul>	<ul style="list-style-type: none"> <li>• Student incorrectly labeled an angle</li> <li>• Student incorrectly labeled the degrees of rotation for one angle</li> </ul>	<ul style="list-style-type: none"> <li>• Student correctly labeled all angles</li> <li>• Student correctly labeled at least one vertex</li> <li>• Student correctly labeled the degrees of rotation for at least one acute angle and one obtuse angle</li> </ul>
<b>Design</b>	<ul style="list-style-type: none"> <li>• Miniature golf hole design is plain and simple</li> <li>• Student lines and angles are sloppy or incorrectly labeled</li> <li>• Miniature golf hole design does not exhibit creativity</li> </ul>	<ul style="list-style-type: none"> <li>• Miniature golf hole design is playable</li> <li>• Student lines and angles are neatly drawn and labeled</li> </ul>	<ul style="list-style-type: none"> <li>• Miniature golf hole design is playable and aesthetically pleasing</li> <li>• Student lines and angles are neatly drawn and labeled</li> <li>• Miniature golf hole design is creative and original</li> </ul>

