

Name \_\_\_\_\_

(PLEASE MAKE A COPY OF THIS DOCUMENT BEFORE YOU START EDITING.)

## Rising Sophomore Summer Math Assignment

**DUE ON THE FIRST DAY OF CLASS**

Directions: [Watch this before you begin](#)

### How you will be graded

- **Part One** Angle Scavenger Hunt
  - Step one completed; work shown **20 points**
  - Step two completed **20 points**
- **Part Two** Khan Academy
  - 10 exercises completed (5 points each) **50 points**
- Assignment Submitted on or before FIRST DAY
  - Submit in *Class of 2026* Google Classroom **10 points**

## Part 1: Angle Scavenger Hunt-Playground Patterns of Cracks

### Objectives:

- Define right, obtuse, acute, and straight angles
- Identify types of angles in the real world
- Analyze types of angles found in cement to determine if any occur more frequently



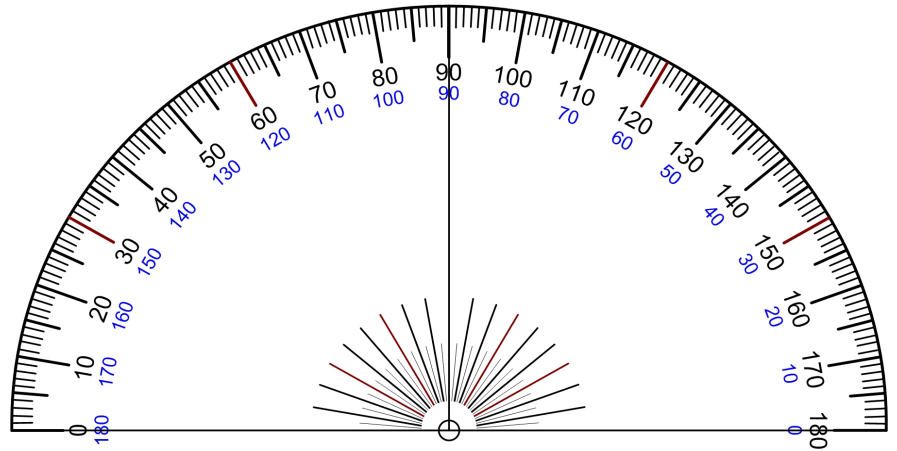
**Background-** Paved surfaces sometimes form cracks due to stress from objects embedded in the surface, or due to stress created by expansion or contraction. In this activity, you'll observe and sketch cracking patterns.

### Step 1: Define each type of angle and find a picture(Google Image Search) for each

Types of Angle	Definition	Real World Image
Right		
Obtuse		
Acute		
Straight		

**Step 2: Carefully observe the surface of the playground or the street where you live, walking slowly as you look for cracking patterns.** Be sure to look for cracks where there are objects in the pavement such as poles, utility covers, and buildings, as well as in open areas.

- Find 4 examples of different patterns of cracks.
- Draw / take a picture with your phone of the cracks and include any structures that touch the cracks.
  - For example, if you see a crack coming from a pole cemented into the playground, include the pole in your sketch. Such objects should be drawn from a bird's eye view—so a cylindrical pole would be represented by circle



- Use the protractor to estimate the size of the angle



Example: This is a pic of cracked cement.

List the types of angles you see in the picture on the left.

**3 obtuse**

- Top --- 120 degrees
- Right --- 125 degrees
- Left--- 115 degrees

**Note:** Take a good guess. It is okay to not be right on the money :)

<b>A Insert Picture Here</b>	<b>List the types of angles</b>
<b>B Insert Picture Here</b>	<b>List the types of angles</b>
<b>C Insert Picture Here</b>	<b>List the types of angles</b>

<b>D. Insert Picture Here</b>	<b>List the types of angles</b>
<b>What do you notice? Are some angles more common than others?</b>	

***\*\*\*What's going on? Force applied to an area is called stress. Stresses in paved surfaces cause cracking. When cracks appear in an open area of the paved surface (when the crack isn't touching an object), you may notice three main cracks with 120° angles between each crack. This pattern forms when the stress is equal in all directions. Uniform stress can be caused by expansion or contraction due to changes in temperature.***

## Part 2: Khan Academy

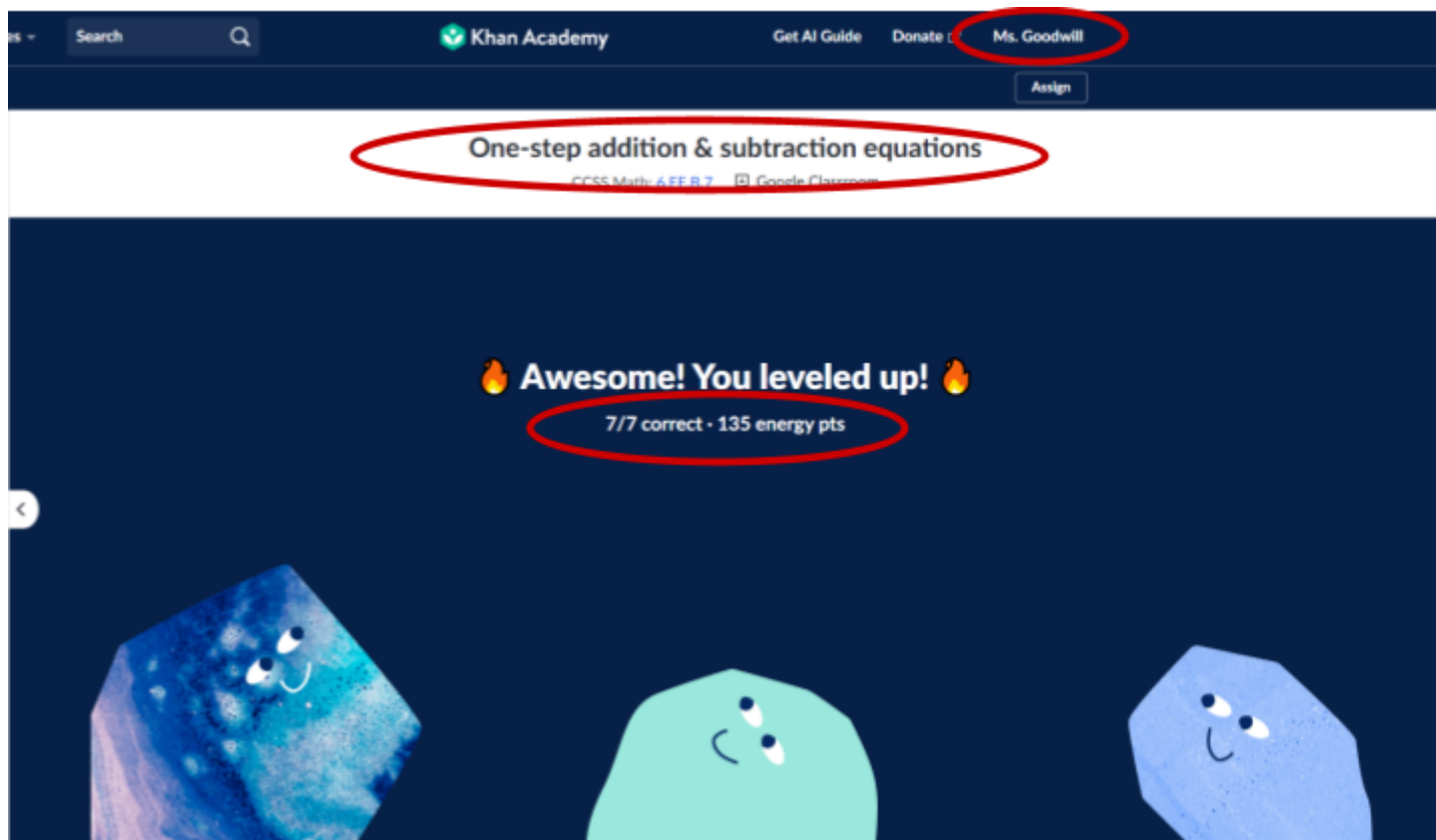
### Objectives:

- Practice identifying and measuring different types of angles

Go to [Khan Academy](#) and complete the exercises listed below. Place a screenshot of completed exercises in the table.

- Log into your Khan Academy account via your Mercy Google Account.
- YOUR NAME should appear in the top right corner of your screenshot
- The NAME of the PRACTICE PROBLEMS should appear center towards the top
- Lastly, your SCORE should appear in the center

You will NOT receive credit for any screenshots without these all three requirements



## Angle Basics:

Exercise	
<a href="#">Angle basics</a>	Place Screenshot Here
<a href="#">Measure angles</a>	Place Screenshot Here

[Draw angles](#)

Place Screenshot Here

[Angles in circles](#)

Place Screenshot Here



[Angle types](#)

Place Screenshot Here

[Types of angles  
by measure](#)

Place Screenshot Here

[Recognize angles in figures](#)

Place Screenshot Here

[Benchmark angles](#)

Place Screenshot Here

[Complementary and supplementary angles \(visual\)](#)

Place Screenshot Here

[Complementary and supplementary angles \(no visual\)](#)

Place Screenshot Here