

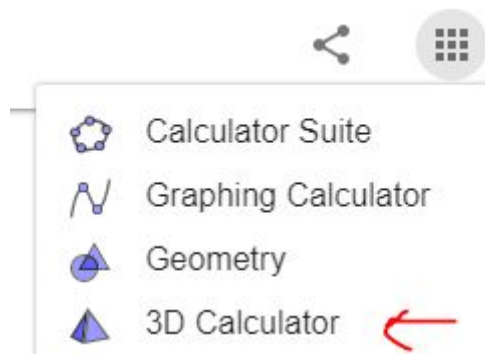
Name:

Date:

## Cube

1. **Set-Up:** Go to [geogebra.org](https://www.geogebra.org) and sign in using your Google email and password. Create an account (this will allow you to save your work!). Make sure to uncheck the boxes on the bottom so that you don't receive emails from the website.

- Click on +NEW and choose GeoGebra Math Calculators.
- Select the 3D calculator option:



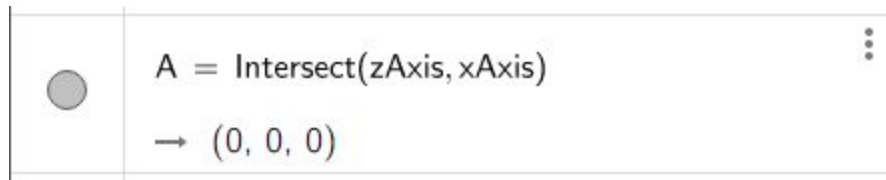
- Create a slider to manipulate the sides of your cube:



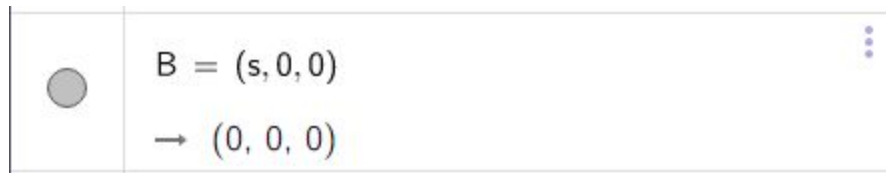
- Click on the “3-dots” at the top right corner and select “Settings”
- Go to the “Slider” tab and set the following to these settings:

Min	
0	
Max	
10	
Increment	
0.0001	

- Create a point at the origin:



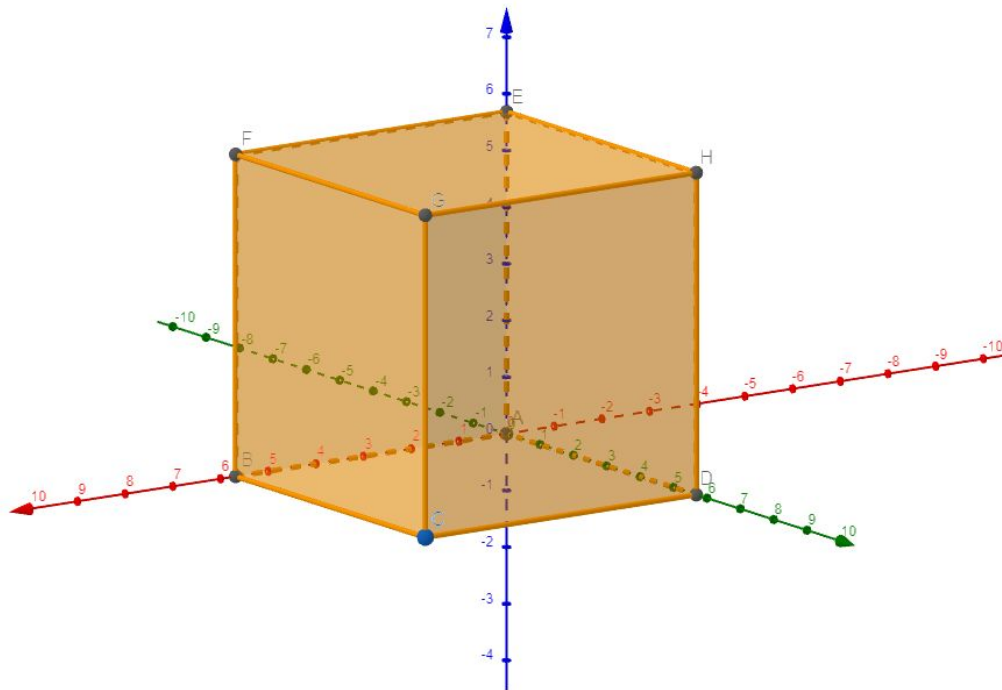
- Create an initial point that corresponds with the side slider:




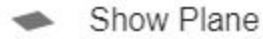
2. **Creating a Cube:** Make sure the slider is GREATER than 0. Switch from “Algebra” mode to “Tools” mode on the purple top-bar. Select the “Cube”



tool **Cube** and select two points, Point A (the point on the origin) and Point B (the initial point for the slider). Go back to “Algebra” mode and manipulate the slider, this will be the length of all sides of the cube.



- Hit the cogwheel on the top-right corner of the object screen 
- Uncheck the “Show Plane” option



3. **Saving your Object:** Select the “3-Lined Menu” icon on the top left corner and make sure to SAVE! Share your object by clicking the “Share” option and copying the link to send it to the recipient.

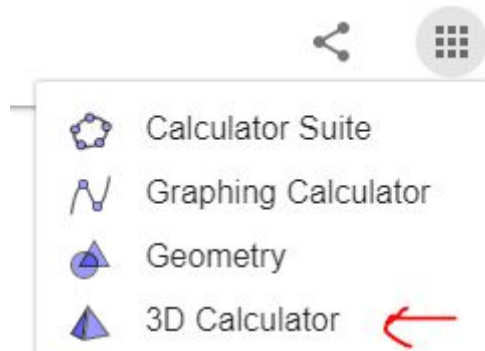
Name:

Date:

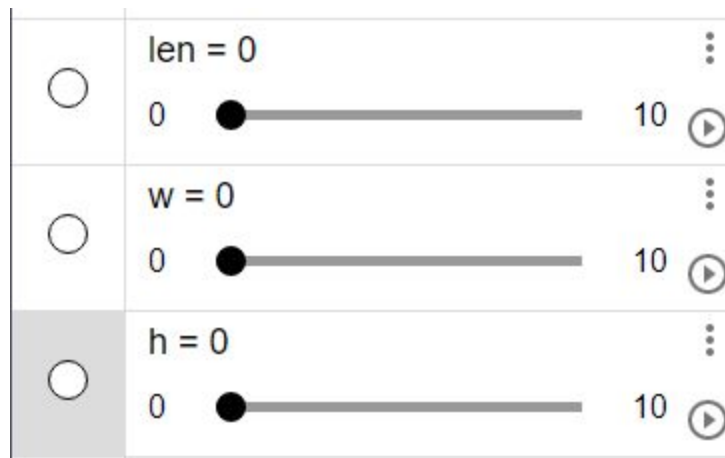
### Rectangular Prism

1. **Set-Up:** Go to [geogebra.org](https://www.geogebra.org) and sign in using your Google email and password. Create an account (this will allow you to save your work!). Make sure to uncheck the boxes on the bottom so that you don't receive emails from the website.

- Click on +NEW and choose GeoGebra Math Calculators.
- Select the 3D calculator option:




- Create the sliders to manipulate the length, width, and height of your rectangle:






- For each slider, click on the “3-dots” at the top right corner and select “Settings”
- Go to the “Slider” tab and set the following to these settings:

Min	0
Max	10
Increment	0.0001

- Create a point at the origin:

	$\text{origin} = \text{Intersect}(\text{xAxis}, \text{zAxis})$ $\rightarrow (0, 0, 0)$	⋮
---	---	---

- Create points for each of the sliders:

	$\text{length} = \begin{pmatrix} \text{len} \\ 0 \\ 0 \end{pmatrix}$ $\rightarrow (0, 0, 0)$	⋮
	$\text{width} = \begin{pmatrix} 0 \\ w \\ 0 \end{pmatrix}$ $\rightarrow (0, 0, 0)$	⋮
	$\text{height} = \begin{pmatrix} 0 \\ 0 \\ h \end{pmatrix}$ $\rightarrow (0, 0, 0)$	⋮

- Length = (len, 0, 0)
- Width = (0, w, 0)
- Height = (0, 0, h)

- Create a point to achieve a face of a polygon:



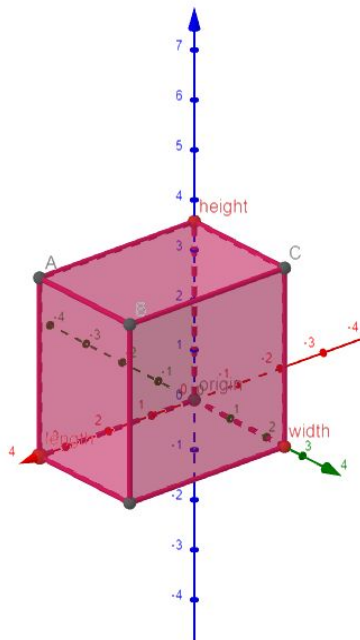
## 2. Creating a Rectangular Prism:


- Make sure the sliders are GREATER than 0. Switch from “Algebra” mode to “Tools” mode on the purple top-bar.
- Click on “MORE” at the bottom of the Basic Tools.

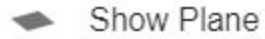


Prism

- Scroll down to the “Solids” section and click on the Prism Tool
- First, using the prism tool, select the following in this sequence to create a rectangle:
  - Point “origin”
  - Point “len”
  - Point “D”
  - Point “width”
  - Point “height”
- Hit “OK” and go back to “Algebra” mode and manipulate the sliders these will be the length, width, and height of your rectangle.



- Hit the cogwheel on the top-right corner of the object screen 
- Uncheck the “Show Plane” option



**3. Saving your Object:** Select the “3-Lined Menu” icon on the top left corner and make sure to SAVE! Share your object by clicking the “Share” option and copying the link to send it to the recipient.

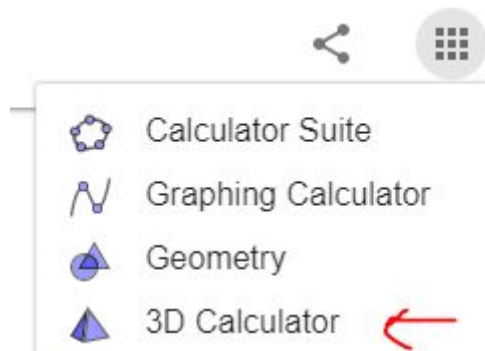
Name:

Date:

## Sphere

1. **Set-Up:** Go to [geogebra.org](https://geogebra.org) and sign in using your Google email and password. Create an account (this will allow you to save your work!). Make sure to uncheck the boxes on the bottom so that you don't receive emails from the website.

- Click on +NEW and choose GeoGebra Math Calculators.
- Select the 3D calculator option:



- Create a slider to manipulate the radius of the sphere:

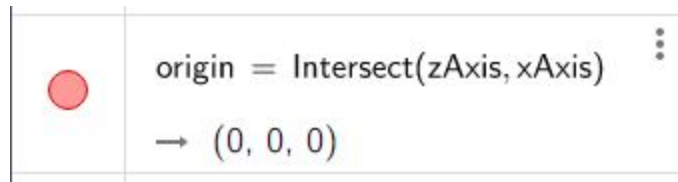


- Click on the "3-dots" at the top right corner and select "Settings"
- Go to the "Slider" tab and set the following to these settings:

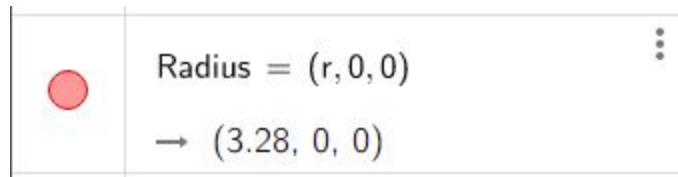
Min	0
Max	10
Increment	0.0001



- Create a point of origin:



- Create an initial point that corresponds with the radius slider:

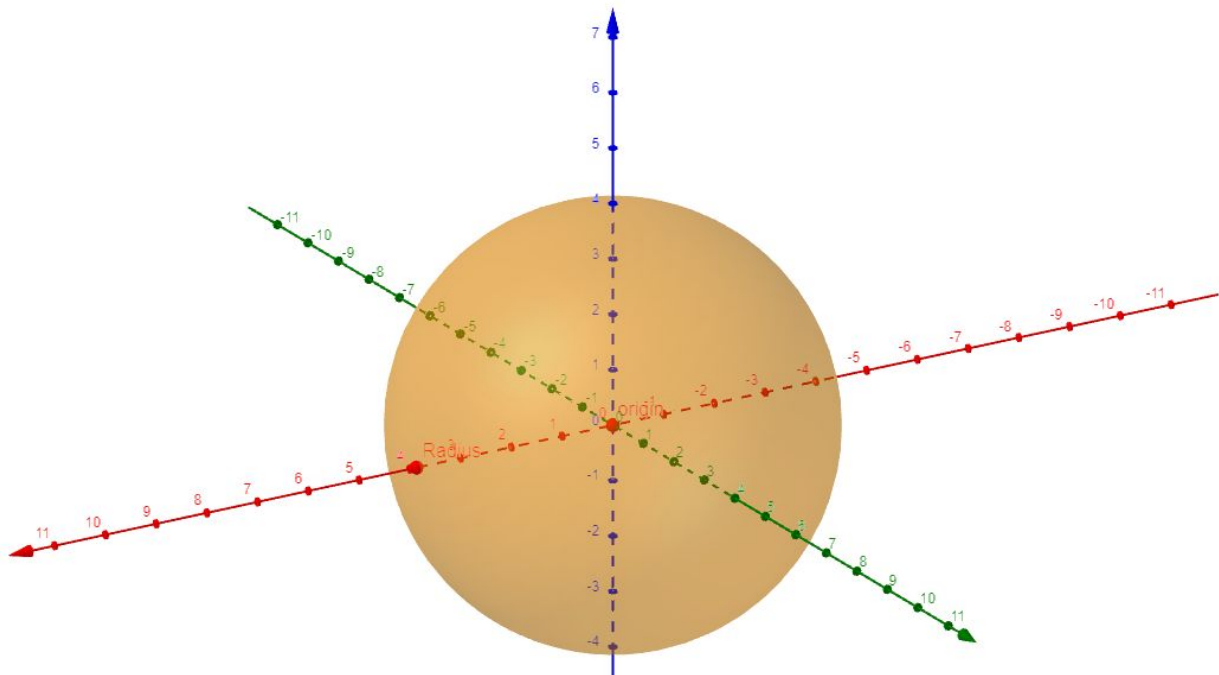


2. **Creating a Sphere:** Make sure the slider is GREATER than 0. Switch from “Algebra” mode to “Tools” mode on the purple top-bar. Select the “Sphere:



Sphere:  
Center & Point

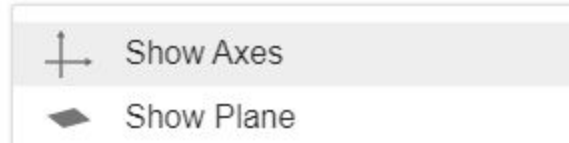
Center & Point” tool and select two points. Point origin (the point where the center will be) and Point Radius (the point corresponding to the sphere’s radius). Go back to “Algebra” mode and manipulate the slider, this will be the radius of your sphere.



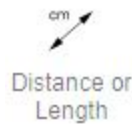
- Hit the cogwheel on the top-right corner of the object screen



- Make sure that both axes and plane are unchecked



- Go to the “Tools” mode by clicking the icon on the purple toolbar
- Scroll down to the “Measure” section and select “Distance or Length”



- Use this tool to measure the distance between your origin and radius

3. **Saving your Object:** Select the “3-Lined Menu” icon on the top left corner and make sure to SAVE! Share your object by clicking the “Share” option and copying the link to send it to the recipient.

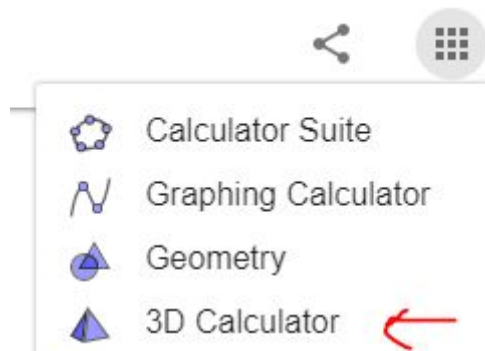
Name:

Date:

## Cylinder

1. **Set-Up:** Go to [geogebra.org](https://geogebra.org) and sign in using your Google email and password. Create an account (this will allow you to save your work!). Make sure to uncheck the boxes on the bottom so that you don't receive emails from the website.

- Click on +NEW and choose GeoGebra Math Calculators.
- Select the 3D calculator option:



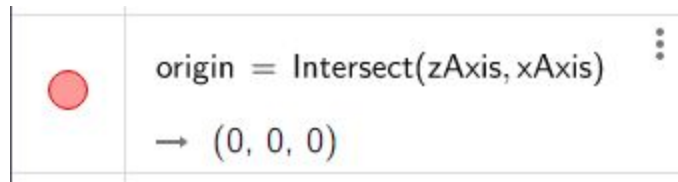
- Create a slider to manipulate the radius of the cylinder:



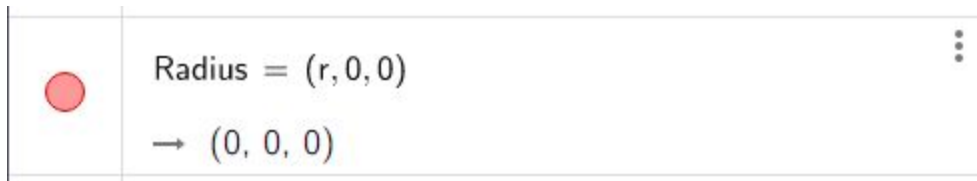
- Click on the "3-dots" at the top right corner and select "Settings"
- Go to the "Slider" tab and set the following to these settings:

Min	0
Max	10
Increment	0.0001

- Create a point of origin:



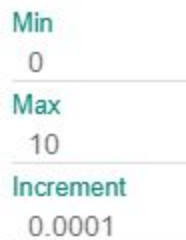
- Create an initial point that corresponds with the radius slider:



- Create a slider to manipulate the height of the cylinder:



- Click on the “3-dots” at the top right corner and select “Settings”
- Go to the “Slider” tab and set the following to these settings:



## 2. Creating a Cylinder

- Make sure the slider is GREATER than 0. Switch from “Algebra” mode to “Tools” mode on the purple top-bar.
- Click on “MORE” at the bottom of the Basic Tools.
- Scroll down to the “Solids” section and click on the Cylinder Tool



- First, Select the Point of Origin (the point where the center will be) and the Point Height (the point corresponding to the cylinder’s height)

- Finally, input the value for the radius slider “r”

Cylinder

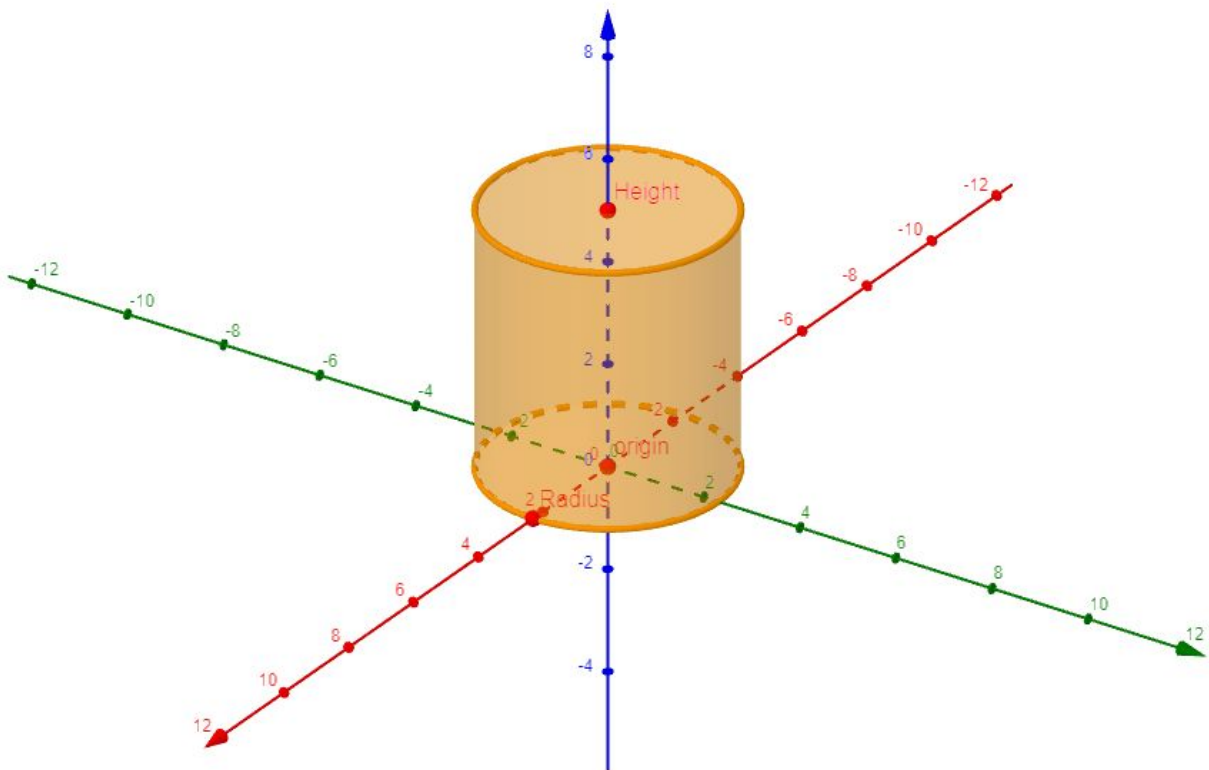
Radius

r

OK

CANCEL

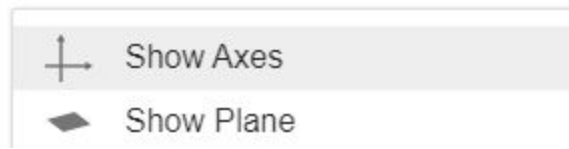
- Hit “OK” and go back to “Algebra” mode and manipulate the sliders “r” and “h” these will be the radius and height of your cylinder



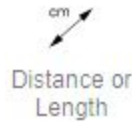
- Hit the cogwheel on the top-right corner of the object screen



- Make sure that both axes and plane are unchecked



- Go to the “Tools” mode by clicking the icon on the purple toolbar
- Scroll down to the “Measure” section and select “Distance or Length”



- Use this tool to measure the distance between your origin and radius
  - Use this tool to measure the distance between your origin and height
3. **Saving your Object:** Select the “3-Lined Menu” icon on the top left corner and make sure to SAVE! Share your object by clicking the “Share” option and copying the link to send it to the recipient.

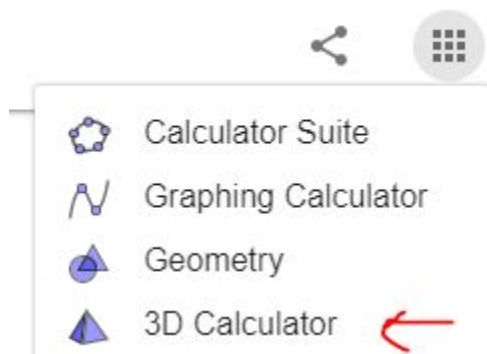
Name:

Due Date:









## Cone

**1. Set Up:** Go to [geogebra.org](https://www.geogebra.org) and sign in using your google email and password. Create an account (this will allow you to save your work!). Make sure to uncheck the boxes on the bottom so that you don't receive emails from the website.

- Next, click on +NEW and choose GeoGebra Math Calculators. This will bring you to the screen you are used to seeing.
- Now go to the 3D calculator section:



- Write the coordinates needed to create a cone with the following coordinates (press enter on each):

	Origin = (0, 0)	
	H = 1 -5  5 	
	Tallness = (0, 0, H) → (0, 0, 1)	

- Click on the “3-dots” at the top right corner of the sliders and select “Settings”
- Go to the “Slider” tab and set the following to these settings:

Min  
0

Max  
10

Increment  
0.0001

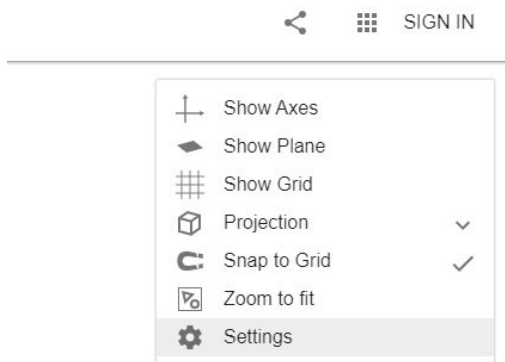
- 
- Make sure that EACH slider is GREATER than 0.

## **2.Creating YOUR cone:**

- Switch from “Algebra” mode to “Tools” mode on the purple top-bar
- Click on “MORE” at the bottom of the Basic Tools.
- Scroll down to the “Solids” section and select the “Cone” tool.



- Cone
- Click on the origin, and then click on the Apex.
- The radius should be labeled as “radius” (Make sure that EACH slider is GREATER than 0).
- Plug in your values for height in H in the apex and values for radius in Radius.
- Go to settings and makes sure that the following are unchecked (also click Zoom to fit):

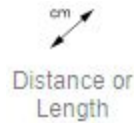


- 
- If your object was created, you did it!



### **3. Measuring YOUR cone:**

- Go to the “Tools” mode by clicking the icon on the purple toolbar.
- Scroll down to the “Measure” section and select “Distance or Length”



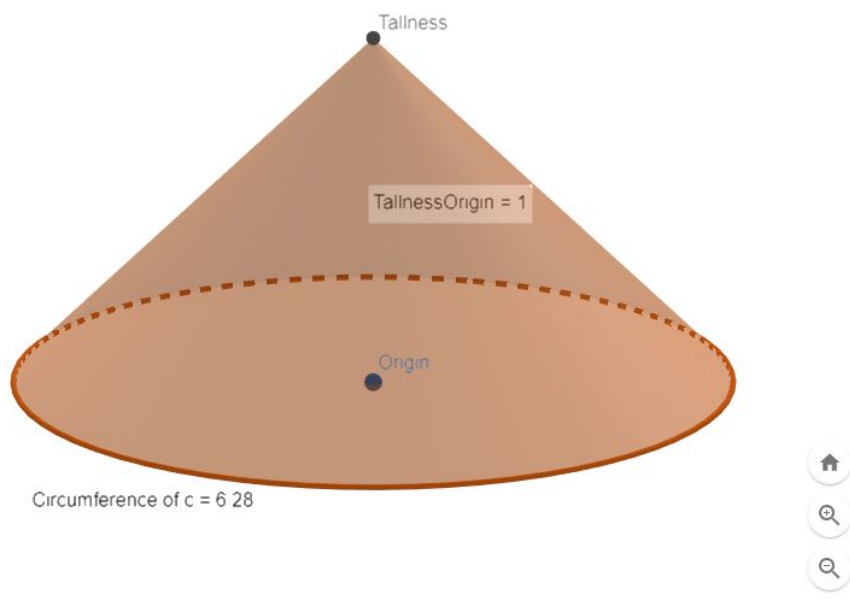
- Click on Tallness then Origin to measure the height
- Click on the side of the Cone to find the Circumference.

### **4. Saving your object**



A link will be provided and can be sent to Mr. Bangs.

What it is supposed to look like (Next Page):





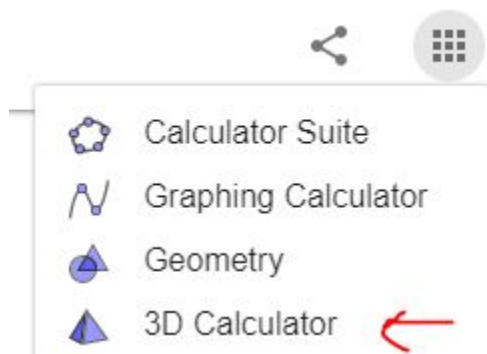
Name:

Due Date:





## Tetrahedron

**1. Set Up:** Go to [geogebra.org](https://www.geogebra.org) and sign in using your google email and password. Create an account (this will allow you to save your work!). Make sure to uncheck the boxes on the bottom so that you don't receive emails from the website.

- Next, click on +NEW and choose GeoGebra Math Calculators. **This will bring you to the screen you are used to seeing.**
- Now go to the 3D calculator section:



- Write the coordinates needed to create a tetrahedron with the following coordinates:

	Origin = (0, 0, 0)	
	Side = (1, 0, 0)	

### **2.Sidelengths:**

- Create another input named **Width** and press enter
- Replace Side = (1,0,0) to Side = (**Width**,0,0) and **press ENTER**.
- The value of the width will correspond with the tetrahedron shown on the graph.
- Click on the “3-dots” at the top right corner of the sliders and select “Settings”
- Go to the “Slider” tabs and set the following to these settings:

Min  
0

Max  
10

Increment  
0.0001

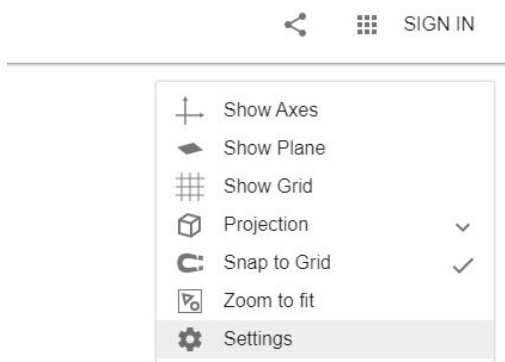
- 
- Make sure that EACH slider is GREATER than 0.

### **3. Creating YOUR tetrahedron:**

- Switch from “Algebra” mode to “Tools” mode on the purple top-bar
- Click on “MORE” at the bottom of the Basic Tools.
- Scroll down to the “Solids” section and select the “Tetrahedron” tool.



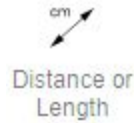
- Click on the origin, and then click on the Side point.
- Go to settings and make sure that the following are unchecked (also click Zoom to fit):



- If your object was created, you did it!

#### **4. Measuring YOUR cone:**

- Go to the “Tools” mode by clicking the icon on the purple toolbar.
- Scroll down to the “Measure” section and select “Distance or Length”



- Click on any side to find the length of the object created.

#### **3. Saving your object**



A link will be provided and can be sent to Mr. Bangs.

What it is supposed to look like (Next Page):

