

Trigonometry

A1.1

Radian angle measure:

An activity to determine how many radii will fit around the circumference of a circle.

Material:

- tape, masking tape either blue or brown.
- string.
- scissors.
- a meter stick is available as an option if you'd like one.
- some way to take a photograph . . .

Procedure: (Students may work individually or in groups of 2 or 3)

1. Find a nice place to work in the hallway.
2. Figure out a way to construct a circle using tape to outline the circumference.
3. A dry erase Marker is NOT part of your equipment and you are NOT allowed to write on the floor. Tape – yes. Marker –no.
4. Figure out a way, using the available materials to clearly indicate the center of the circle.
5. Use the string to measure the radius of the circle, one way to do this would be to cut off a piece of string the same length as the radius.
6. Lay the string along the curve of the circle to determine how many times the radius will divide into the circumference. This is the crucial measurement we are after.
7. Take a digital photo of the circle you have constructed. Have this photo convey as much information to the viewer as possible. This photo should include all your group members (have someone else actually take the photo for you, might be one way to do this)
8. Remove all the tape from the floor and wad it up to throw away. Take a digital photo of the clean floor (and the wad of tape!!!!) as proof.
9. Blast back to room H243.

What to turn in:

Point val:

2 _____

2 _____

2 _____

2 _____

2 _____

2 _____

6 _____

$\Sigma = 18$

- A **one** page report. (shown in class using doc camera) (one per group)
- Include a brief paragraph which describes the procedure you used.
- Clearly tell the number you got for step 6 above, -- how many radii fit in your circle
- Photo of the circle including group members
- Photo of the clean floor after tape is removed.
- Photos printed in color.
- Turned in **on time**, and the group size was within stated bounds.

Due date - _____