

Video Supplement

Norms for Watching Video (if not using your own)

- Speak from the “I” perspective. For example: “If I could rewind the tape and ask students a question, I would ask...”
- Be inquisitive, not judgmental. For example: “I wonder what might happen if,” instead of “the teachers should have...”
- Justify your ideas and conjectures based on the video clip, and not other parts of the lesson that you didn’t see. For example: “I think that the student understands...because in the video she...”
- Focus on how what you learned from the video might help you implement this (or similar lessons) with your own students.

School Context

- School Type: Urban Public Specialized High School
- School Demographic Information (approximate):
 - Students of color: 75%
 - Free and reduced lunch: 60%
 - English language learners: <5%
 - Students with special needs: <5%

Lesson Context

- Subject: Geometry (Regular Track)
- Unit: Similarity
- Number of students in class: 34
- Lesson duration: Two 45-minute periods
- Prior preparation: Students have been taught lessons about similarity. The teacher explained the term “slant height” prior to the activity.

Video Context

Students tried the pre-assessment before the lesson for 20 minutes on their own. The next day, the teacher handed out the “Modeling Rolling Cups” sheet they explored the day before the lesson. He also provided them with the link to the Rolling Cups Calculator applet and a blank table for additional data points. Students in pairs are expected to create a model that explains the roll radius given the information on the sheet. They are also encouraged to explain whether their model works and why it works supporting their claims with multiple data points. The video shows one pair’s discussion of creating a model.

Discussion Questions

Equitable Access to Mathematics Content: *Do I get to participate in meaningful math learning? Can I hide or be ignored?*

1. Who participates and how? Are any students ignored or “hidden” in the conversation?
2. As a teacher, what questions might we ask or moves might we make that encourage more meaningful participation towards important mathematical ideas by all students?

Video Transcript

Legend		
T	Teacher	Per and within dialogue
S1 – S2	Students 1 - 2	Per and within dialogue
C	Class	Per and within dialogue
[]	Actions/Non-verbal	Dialogue
{{x}}	Sounds like	Dialogue
{{}}	Inaudible	Dialogue

- 1 S1: 00:00 Isn't it like, I keep thinking about problems where you could like, if you could roll, how many times you roll it...I don't know, it's something about circumference too. Isn't it?
- 2 S2: Yeah that's, circumference has no relationship whatsoever.
- 3 S1: Yes it, kind of does.
- 4 S2: No, no, no, like, the numbers here [showing his calculator screen, see Figure 1]

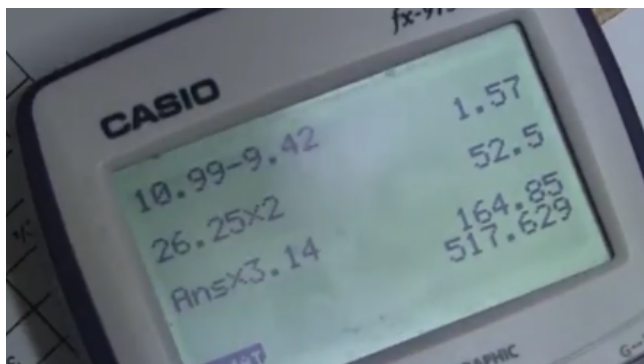


FIGURE 1

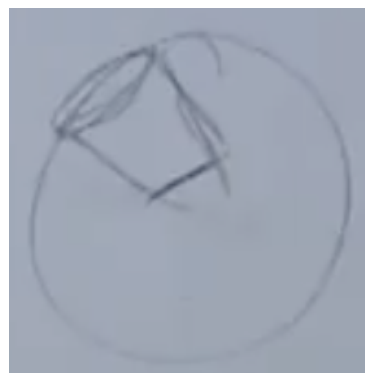


FIGURE 2

- 5 S1: Well, you {{can't}} just straight, do the...
- 6 S2: See, 164.85 is the whole thing, like a the circle that it makes.
- 7 S1: Yeah, and then you...
- 8 S2: The wide diameter is, the circumference of that is 10.99, the small one is 9.42.
- 9 S1: 00:31 Is that even how you do it?
- 10 S2: I don't know. There is no relationship though.
- 11 S1: See, when you think about it, it's just rolls and it's uh...How many times {{you roll it}} Could it be this circumference [pointing her drawing, Figure 2] divided by this circumference? No? Like, I don't know where the narrow diameter comes from.