How to make sure we* can't help you:

- "How do I do problem 3?"
- "What equation do I use for problem 4?"
- "I got 10 for problem 3, but MP said it's wrong. Why isn't it right?"
- "I'm stuck on problem 5 on MP."
- "I'm doing what the instructor said to do for problem 2 and it's not working."
- "I'm doing exactly what my friend did for problem 7 and it worked for him, so I know I'm doing it right, but MP keeps saying it's wrong."

* "we" means the entire Physics 211 community!

How to make sure we *can* help you:

MP5-7: Is this a centripetal acceleration problem?

I'm working on #MP5-7. ← *(That's MP5, question 7 - Did you search first? Tags help!)*

Here's the text of the problem with my numbers:

> A 515 g ball swings in a vertical circle at the end of a 1.0 m-long string. When the ball is at the bottom of the circle, the tension in the string is 15 N.

I have been approaching this as a centripetal acceleration problem, so the tension would be given by T = ma, where $$a = v^2/r.$$

When I solve for v, I get $$v = \sqrt{rT/m}.$$ ← (LaTeX not required, but it looks cool!)

I made sure to convert the mass to 0.515 kg and I used r = 1.0 m, and T = 15 N. I get v = 5.40 m/s but it's not correct. Is my reasoning correct on this problem?

Please tell us your reasoning; if stuck, please articulate exactly what concept/issue it is you are stuck on.

Before You Post:
Did you draw a picture? This is the first step to solving any problem.
Instructors **will not answer** any question without first seeing your picture!

Good responses to questions on piazza

Try finding the displacement of the first triangular part of the graph, and then you can find the remaining displacement that you need from where the velocity is stable.

Keep in mind you're given a graph of velocity; therefore, the area under the curve is the displacement. With that in mind, how much displacement occurs between 0 and 4 seconds? How about between 4 and 8 seconds? If you can figure that out, you can answer the question.

* No equations!
* Asks questions!!
* Leaves something for the reader to figure out