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| question | 2 views |
| <div>Daily Challenge 18.1</div> <div>(Due: Monday 11/12 at 12:00 noon Eastern)</div> <p>Since we will be preparing for Splash this week, I will post much shorter <i>exercises</i> (rather than problems/challenges) for the week of 11/12 to 11/19. Each of these should take 5-10 minutes.</p> <p>This should leave you more time to finish slides and to catch up on other challenges. I still expect you to submit the overdue DC 17.5 and to keep up on these exercise DCs, even while traveling and at Splash.</p> <div>(1) Exercise: a half-period of sine.</div> <p>Compute the area under a positive half-period of the sine function. That is, compute</p> $\int_0^\pi \sin(x) \, dx.$ <p>You may use FTC.</p> <div>daily_challenge</div> <div>Updated 5 months ago by Christian Ferko</div> | |
| <div>the students' answer, where students collectively construct a single answer</div> <p>The anti-derivative of $\sin(x)$ is $-\cos(x)$, so we see that the area under this graph by $-\cos(\pi) + \cos(0) = 2$. :logwow:</p> <div>Updated 4 months ago by Logan Pachulski</div> | |
| <div>the instructors' answer, where instructors collectively construct a single answer</div> <p>Using the fundamental theorem,</p> $\int_0^\pi \sin(x) \, dx = \left[-\cos(x)\right]_0^\pi = (-\cos(\pi)) - (-\cos(0)) = 2.$ <div>Updated 4 months ago by Christian Ferko</div> | |
| <div>followup discussions for lingering questions and comments</div> | |