WIND STUDY | Wind Study is intended for grades 5-8 and 8-11
Questions posted on: Monday   Answers posted on: Friday
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2020Q3   (2D GEOMETRY, RATES)

One Energy's turbines sit upon 80-meter-tall towers and have a ladder that runs from the basement up to the top deck, just below the nacelle. Employees have to climb this ladder to perform maintenance on the turbine. There are 258 rungs on the ladder and there are 270 mm between each rung. Each ladder rung is a 30 by 30 mm square tube. There are 125 mm of side rail extending beyond the top and bottom rungs of the ladder. (Image below is not to scale.)

L1: How long is the ladder?

L2: One of One Energy's technicians, Justin, needs to climb from the basement of a turbine to the top deck. If he can climb 3 meters in one minute, how long will it take him to make the climb?

125 mm

30 mm

270 mm