# MATH in PHYSICS: METRIC 

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A 45.7-Meter Field Goal? The Indy 805K? Florida Stokes the Metric Debate.


Tristan Schultheis, of Astronaut High School, competing in the high jump at the Florida High School State Athletic Association state track and field finals on May 6, 2016, in Bradenton, Fla.

INTRODUCTION: Goal of this application is to confirm unit conversions in the article below and above article description.

QUESTIONS: (a) Convert a 45.7 m . field goal to yards ?, (b) Convert 805 km . to miles ?, (c) Convert $\mathbf{1 2 1 . 9 2}$ meter home run to ft . ? (d) Show that Curry's 35 ft . basketball shot is 10.67 meters? (e) Show a 15 ft . pole vault is 4.57 meters? , (f) Show 55 ft .8 .5 inches shot-put throw is 16.98 meters?, (g) Show a 26 ft .3 inch. long jump is 8 meters? (h) Show that a football player who does 1000 yards rushing is equivalent to 914.4 meters ?

HINTS: 1 meter $=1.0936$ yards , 0.621 mile $=1 \mathrm{~km} ., 3.28 \mathrm{ft} .=1 \mathrm{~m}$. 12 inches $=1$ foot .

ANSWERS: (a) $50 \mathrm{yd} .$, (b) 500 mi. , (c) 400 ft ., (d) $10.67 \mathrm{~m} .$, (e) 4.57 m (f) $\mathbf{1 6 . 9 8}$ meters, (g) $\mathbf{8}$ meters, (h) 914.4 meters.

It seems highly unlikely that the 121.92-meter home run would gain any more traction now than it did during baseball's flirtation with metric distances on outfield fences in the 1970s. And a television audience might be more confused than delirious if it was announced that Stephen Curry had just hit a buzzer-beater from 10.67 meters instead of 35 feet. As the outdoor track season opens in February, Florida high schools will apparently become the first in the country to measure field events using the metric system, as they have done for all track events since 1990, introducing it for all district, regional and state track and field championships. Metric measurements for the throwing and jumping events are being encouraged for regular-season meets this year. That means a 15-foot pole vault will be recorded as 4.57 meters. A shot-put throw of 55 feet $8 \frac{1}{2}$ inches will be measured and announced as 16.98 meters. Long jumpers and javelin throwers, among others, will face a similarly new world in which, supporters argue, there will be more accurate measurements and, thus, few ties. "If they announce that a long jump is an 8-meter jump, people in the stands don't understand that" it is a jump of 26 feet $\mathbf{3}$ inches, Brauman said. If results were reported both metrically and in feet and inches "to where the fans understand it better, I don't see any problem with it," he added. Thompson, the chief track official with the Florida high school association, said that results would be published both in meters and in feet and inches. "This isn't marketability," Reid wrote on her Twitter account in 2015, "it's male nostalgia."
Still, Lamppa believes the metric system will not be fully embraced by the American sporting culture until the unlikely time when the gold standard in football becomes the 914.4-meter rusher instead of the 1000 yard rusher.
"If football goes metric," Lamppa said, "that's when we know that the English system has been purged from America."

