

I U P U I
MATH CLUB TEASER #43

April 30, 2010
(due May 7, 2010)

SOLUTION

The full tank is good for a 120 mile trip, so the Professor uses it to transport a barrel 60 miles, drop it, and return to the starting point where the second barrel is waiting.

The tank is empty, so the Professor fills it, transports the second barrel to the 60 mile mark (using 5 gallons) and refills.

Now there is a full barrel and a full tank at the 60 mile mark, together with a barrel that holds 30 gallons. For all practical purposes, 15 gallons were used to carry everything 60 miles. The Professor repeats the procedure two times, using 30 more gallons to advance 120 miles. At this point, there is a full barrel and a full tank at the 180 mile mark, while the second barrel is empty.

With a total of 55 gallons, the Professor can travel the remaining 660 miles, refilling as needed, and smuggling the marshmallows just in time for the campfire. How the Professor goes back home is a mystery.

SOLVED BY:

Captain Nemo.