

Mole Problem Project

Problem 1: A mole of Big Macs™ (stacked on top of each other) would make how many stacks if each stack reached from the earth to the moon?

I need to know the following to solve this problem:

1. The height of 1 Big Mac™

Answer: I bought a Big Mac and measured the height. It was 6.51cm.

2. The distance from the earth to the moon.

Answer: 382,260 km

www.freemars.org/jeff/planets/Luna/Luna.htm

Solving the problem:

? stacks →

6.022×10^{23} Big Macs		6.51 cm		1 km		1 stack (distance from earth to moon)
1		1 Big Mac		100,000 cm		382,260 km

$$= 1.026 \times 10^{14} \text{ stacks}$$
$$10,260,000,000,000 \text{ stacks}$$



Works Cited:

Root, Jeff. "Earth and Moon to Scale." 2003. 25 Oct. 2010 <<http://www.freemars.org/jeff/planets/Luna/Luna.htm>>.