

## A Moving Dilemma Math in my Life #1

About a year ago, I moved from Seattle, WA, to Boulder, CO. Most of my furniture was the usual sort of rubble, so I sold it or dumped it on unsuspecting charitable organisations. When it came to my desk though, I *had* to find another solution.

To get a quote from a shipping or moving company, I had to be able to give the weight and dimensions of the desk. Measuring the dimensions was easy. Measuring the weight was a stumper. I didn't have a scale large enough to hold the whole desk, and I couldn't lift the desk myself while standing on the scale (see sketch 1).

Hmmm.

After extensive consultation with many friends having various degrees of expertise in the Weighing of Heavy and Unwieldy Desks, I finally hit on a plan. When a desk is resting on the floor, its weight is evenly divided among the four legs. So if I lift one end of the desk ever so slightly, raising two legs and leaving two on the floor, exactly half the weight should be supported by my arms (see sketch 2).

So I found the bathroom scales (very accurate of course), placed them beside the desk, stood on them, and lifted the desk a wee bit. The scale read about 205 lbs. My weight alone, according to the scale (not at all accurate, of course), was 130 lbs. So that gave me  $205 - 130 = 75$  lbs for *half* the weight of the desk. So the full weight of the desk was  $2 \times 75 = 150$  lbs. Too expensive to ship. The good news is that I stored the desk in my friend's garage, and now that friend is my sweetheart!