EXAMPLE #3:

A crane can lift a maximum of 5 t. Sandstone weighs about 150 lb per cubic foot, and a container contains 70 cubic feet of sandstone. Can the crane be used to load the container onto a train?

$\frac{150\ lbs}{ft^3}(70\ ft^3) = 10\,500\ lbs$

$10\,500\ lbs \times \frac{1\ kg}{2.2\ lbs} \times \frac{1\ t}{1000\ kg} = 4.8\ t$

4.8 t so yes

Yes the crane can lift the load.

EXAMPLE #4:

Josephine is sending a gift of a bottle of maple syrup that weighs 3 lb, and 3 packages of smoked salmon that each weigh 100 g. If the package's total weight is less than 2 kg, she can ship it at a cheaper rate. Will she be able to do so?

$3\text{lb} \times \frac{1\text{kg}}{2.2\text{lb}} = 1.36\text{kg}$

$3 \times 100\text{g} \times \frac{\text{kg}}{1000\text{g}} = 0.30$

Total 1.66kg

She will get the cheaper rate because the mass is under 2kg.

Homework:

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Note: #4... 1 L of water = 1 kg