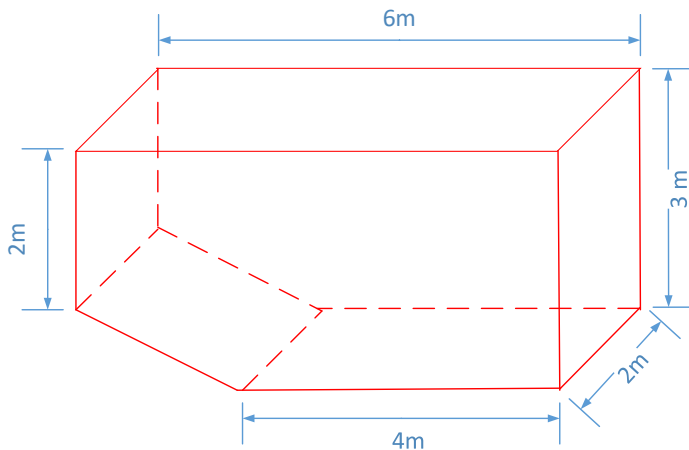# Classroom to Campus: Math and Stats Challenge

Grade 12 – MCT4C

Topic D: Applications of Geometry
Calculating Costs for Large-Scale Dirt Removal Project

A company needs to remove 17 000 cubic metres of dirt for agricultural purposes. The trucks available for transport have a rectangular type cargo bed with the following shape and measurements:

Each truck requires a driver and a labourer.

The truck cost per trip, including fuel and maintenance, is $150, and a labour cost per trip is $200, making the total cost per trip $350.

There are 5 trucks available.

a) Determine the volume of dirt that each truck can carry in cubic metres. *(Round your final answer to the two decimal places. Include units.)*

b) How many trips will be required to transport all 17 000 cubic metres of dirt using these trucks? *(Provide your final answer as an integer.)*

c) What will be the total cost to remove all the dirt, considering the total cost per trip of $350 and the number of trips needed? *(Round your final answer to the nearest dollar.)*

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