Weigh up your goods on the railway Page 1

Many different types of goods were transported along the railway, such as coal, coke, limestone, sand and oil. However, each wagon was only allowed to carry a certain weight, otherwise it might break or be too heavy for the horses to pull.

The various types of goods weighed differently, therefore your task is to find out the answers to the following questions, assuming that each wagon was not allowed to carry more than 3,000 kilogrammes (3 tonnes):

Goods	How many kilograms fit into 1 cubic metre
Coal	750kg
Coke	600kg
Limestone	2,700kg
Sand	1,600kg
Oil	900kg

A. If a factory owner wanted 48 cubic metres of coal:

   1. How many wagons would be needed to deliver it?

   2. How heavy would 48 cubic metres of coal weigh in tonnes?

B. However, the next time the factory owner wanted something to burn in his boilers he decided to try coke instead of coal but wasn't sure if it would work, so he ordered less, to try it out before ordering a large amount. He ordered 24 cubic metres of coke.

   1. How many wagons would be needed to deliver it?

   2. How heavy would 24 cubic metres of coke weigh in tonnes?

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C. A builder ordered 50 tonnes of limestone blocks to build a house

   1. How many wagons would be needed to transport his stone?

   2. To make sure that he had ordered the right amount he decided to calculate how many cubic metres 50 tonnes would be, to see if that would be enough to build the walls. Please calculate:

Goods	How many kilograms fit into 1 cubic metre
Coal	750kg
Coke	600kg
Limestone	2,700kg
Sand	1,600kg
Oil	900kg

D. The builder also needed sand and estimated that he needed 12 cubic metres

   1. How heavy would his sand weigh?

   2. How many wagons would be needed to deliver his sand?

E. Another factory owner used oil lamps so that his workers could see better in the dark days of winter. He wanted 10,000 litres of oil delivering. There are 1,000 litres in 1 cubic metre.

   1. What is the largest number of litres that could be carried in each wagon?

   2. How many wagons would be needed for his delivery?