GRADE 7

ENTRANCE MATHEMATICS TEST

Instructions:

- No calculator is allowed, all working must be done on extra papers – PLEASE DO NOT WRITE ON THIS INSTRUCTION SHEET.
- Points are being awarded also for the method, not only the final answer, so it is advised to show all working.
- Questions can be done in any order and each has the same amount of points, though some are easier than the others.
- The allocated time is 45 minutes

START OF THE TEST

Exe 1

Find Δ if:

a) $\dfrac{\Delta}{52} = \dfrac{7}{13}$

b) $\dfrac{108}{\Delta} = \dfrac{12}{7}$

Exe 2

Clare has 3 assignments to complete before the weekend is over. She spends $\dfrac{1}{4}$ of her spare time on her Biology assignment, $\dfrac{2}{5}$ of her spare time om English and $\dfrac{9}{40}$ of her spare time on Geography.

a) Arrange these subjects according to time spent, from highest to lowest.
b) What fraction of Clare´s time is not spent on any of these subjects?

Exe 3

Find:

a) 48% of $300.
b) 40% of a quantity if 18% of the quantity is 432.
c) what percentage is 550 g out of 1.25 kg.

Exe 4

Ruth bought a car for $2500 and sold it for $1750. Find:

a) the profit or loss made.
b) the percentage profit or loss made from the the cost.

Exe 5

Suppose there are 3 cups and 7 nails.

a) If there are k nails in each cup, what expression represents the total number of nails?
b) What is the total number of nails present if k = 25 ?

Exe 6

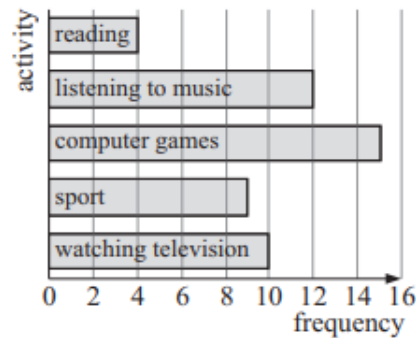Solve the equations

a) $3(2x + 3) - 4(3x - 5) = 5$

b) $2x = 12.5 - \frac{1}{2}x$

Exe 7

A water filter can clean 45 liters of water in 3 hours. When exactly will the filter finish cleaning an aquarium with 200 liters, if we switch it on at 8:00 in the morning ?

Exe 8

50 randomly selected year 8 students from a local high school were asked to name their favourite leisure time activity. The results of the survey are displayed in the graph shown:

What sort of graph is being used?

Which was the most favoured leisure time activity?

a How many students chose sport as their favourite leisure time activity?

b What percentage of the students chose computer games as their favourite leisure time activity?

c What percentage of the students chose reading or watching television as their favourite leisure time activity?

END OF THE TEST