Polynesian Migration (SS+Math)

Scenario:

A Polynesian waka is travelling from Hawaiki to Aotearoa.
There are **28 people** on the waka.
The journey is expected to take **18 days**.

Question 1 – Water Calculation

Each person needs **3 litres of water per day**.

a) How many litres of water are needed for **1 day** for everyone on the waka?

b) How many litres of water are needed for the entire **18-day journey**?

Question 2 – Food Supplies

Each food basket can feed 4 people for 1 day.

a) How many baskets are needed for 28 people for 1 day?

b) How many baskets are needed for the full 18-day journey?

Question 3 – Travel Distance

The waka travels approximately 110 km per day.

a) How far will the waka travel in 18 days?

b) If bad weather slows the waka by 20 km in one day, how far will it travel that day?

Question 4 – Weight on the Waka

The waka can safely carry 5000 kg.

The supplies include:

- water = 1512 kg
- food = 980 kg
- tools and equipment = 720 kg
- passengers = 1540 kg

a) What is the total weight?

b) Can the waka safely carry the load?

Question 5 – Challenge

The waka leaves with 1600 litres of water. After 12 days, the travellers have used 1008 litres.

a) How much water is left?

b) Will there be enough water for the remaining 6 days?