

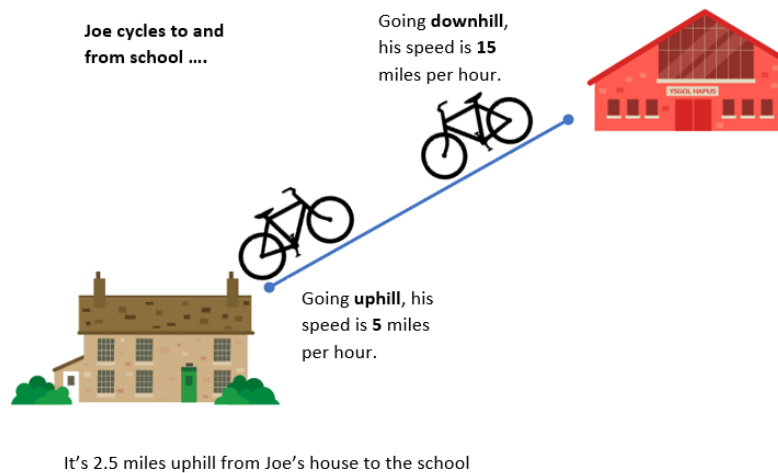
Reasoning Challenge 1

17 year old Sandhya lives with her family in the Nepalese village of Saraswoti Tol. She often has to leave her lessons to fetch water from a nearby well in a jerry can.

Task

Use the below information to create a diagram which shows Sandhya's walk to and from the well.

An example diagram for has been provided below, showing Joe's journey to and from the library:

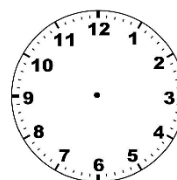


Use the information below to create your diagram for Sandhya's journey.

- It is 4 miles downhill from Sandhya's village to the well.
- Sandhya leaves her village at 4.45am.
- Sandhya starts her journey from home.



- Walking downhill to the well, with an empty jerry can, Sandhya's speed is 3 miles per hour.
- Walking home from the well, uphill, with a full jerry can in the heat of the sun, her speed is 2 miles per hour.
- She spends 45 minutes at the well, first queuing with the other villagers and then filling her jerry can.



What time will Sandhya arrive home?





How many kilometres has Sandhya walked by the time she gets back home?

(HELP: 1 mile = 1600m)

Challenge: Can you work out her average walking speed for the total walk?

Reasoning Challenge 2

A jerry can holds 20 litres of water.

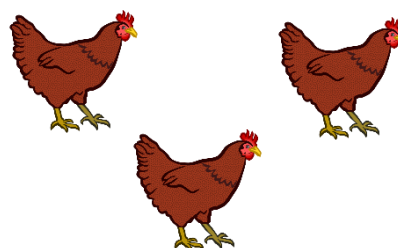
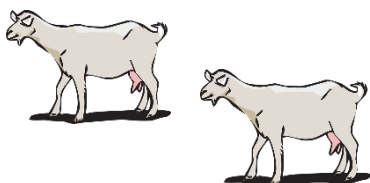
Use the information below and calculate how many jerry cans Sandhya and her friends need to fill at the well to enable the family to have sufficient water to drink and complete all of their daily chores.

Water to Drink	2 litres per person
Water for the Animals	4.5 litres per goat, 0.5 litres per hen
Washing	10 litres twice a day
Watering Crops	20 litres per day
Washing Clothes	10 litres per day
Cooking	5 litres three times a day
Washing Dishes	8 litres three times a day

There are **seven** family members.



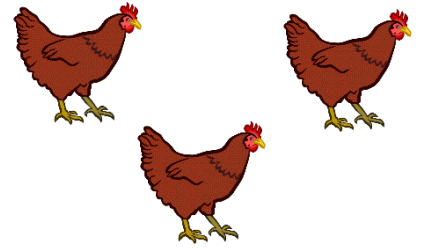
The family have **two** goats and **three** hens.





Reasoning Challenge 3

Sandhya's three hens are all different ages.
Their ages, in years, add up to 15.
Their ages, in years, multiplied together equal 80.



What is the age of each hen?

A large, empty rectangular box with a blue border, intended for the student to write their solution. In the top-left corner of the box, there is a small illustration of a yellow pencil with a pink eraser and a sharpened lead tip.

Reasoning Challenge 4

Welsh Water visit a primary school in South Wales to talk to them about Water and WaterAid. Following this visit, some children at the school decide that they would like to raise money for WaterAid to help children like Sandhya in Nepal.

They have two fundraising ideas. Decide which idea would allow them to raise the most money.

Fundraising Idea no. 1

Create 500 Christmas cards with a Nepalese theme and sell them to parents and teachers.

Key information:

Design and print 500 cards

- Cost of producing each card: 35p
- Sell each card at £1.50
- Sell at least 75% of the cards



Fundraising Idea no. 2

Hold a sponsored walk for Key Stage 2 pupils.



Key information:

- There are 180 pupils in KS2
- Design and print 180 sponsor forms.
- Cost per form: 12p
- Aim for 50% of pupils to participate and raise £5 minimum sponsorship.

