

**Age 14+ Level ★  
Worksheet 1****1. Honey Bees**

One gallon of honey provides fuel for one bee to fly about seven million miles.

Roughly how many bees could fly one thousand miles if they had ten gallons of honey?

**2. Tummy Ache**

Timmy, Tammy and Tommy all set off separately to visit their doctor, leaving their homes at exactly the same time.

Timmy cycles 8 km at an average speed of 20 km/hr.

Tammy walks 1.2 km at an average speed of 4 km/hr.

Tommy drives 16.5 km at an average speed of 45 km/hr.

In what order do they arrive at the doctor's surgery?

**3. The London Eye**

The 80 spokes of the giant wheel *The London Eye* are made from 4 miles of cable.

Roughly what is the circumference of the wheel in metres?

**4. Hiking the Hill**

Sarah walks uphill at an average of 2 miles per hour, and downhill at an average of 4 miles per hour.

She goes for a 6 mile hike up a hill, and then returns downhill by the same route.

What is Sarah's average speed in miles per hour for the whole journey?

**5. Caught in the Web**

The mass of insects caught by spiders in a year in the UK is approximately equal to the mass of the human population of the UK.

Assuming this population is 60 million, and the average mass of a human is 70 kg, what is the mass, in tonnes, of insects caught by spiders per year in the UK?

*These problems are adapted from UKMT ([ukmt.org.uk](http://ukmt.org.uk)) and WMC ([competition.ac](http://competition.ac)) problems.*