Age 11+ Level ★
Worksheet 2

1.   Turbo Tortoise
Harriet Hare and Turbo Tortoise want to cross the finish line together on their 12 mile woodland race. Turbo sets off at 8:15 am and trots at a constant speed of 4 mph. Given that Harriet runs at a constant speed of 8 mph, at what time should she set off?

2.   A Classy Ratio
There are six more girls than boys in Miss Spelling's class of 24 pupils. What is the ratio of girls to boys in the class?

3.   Printer Ink
A small ink cartridge has enough ink to print 600 pages.
Three small ink cartridges can print as many pages as two medium cartridges.
Three medium cartridges can print as many pages as two large cartridges.

How many pages can be printed using a large cartridge?

4.   Dean's Mountain
Dean runs up a mountain road at 8 km per hour. It takes him one hour to get to the top.

He runs down the same mountain at 12 km per hour. How long does it take him to run down the mountain?

5.   Speed over a Bridge
A train that is 100 metres long is travelling at a constant speed. It takes 30 seconds to clear a bridge which is 400 metres long.

What speed is the train travelling at, in kilometres per hour?

6.   Athletics Club
An athletics club has two types of member: junior and adult. The junior members are either boys or girls. There are 16 more adult members than there are junior members.

The ratio of girls to boys to adults is 3 : 4 : 9.

In total, how many members does the club have?

These problems are adapted from UKMT (ukmt.org.uk) and SEAMC (seamc.asia) problems.