Problem of the Week
Problem C and Solution
Ride On, Ride On!

Problem

A motorcycle and a delivery truck left a roadside diner at the same time. After travelling in the same direction for one and one-quarter hours, the motorcycle had travelled 25 km farther than the delivery truck. If the average speed of the motorcycle was 60 km/h, find the average speed of the delivery truck.

Solution

We can calculate distance by multiplying the average speed by the time.

In one and one-quarter hours at 60 km/h, the motorcycle would travel $60 \times 1\frac{1}{4} = 60 \times \frac{5}{4} = 75$ km.

In the same time, the delivery truck travels 25 km less. The delivery truck has travelled $75 - 25 = 50$ km. Since the distance travelled equals the average speed multiplied by the time, then the average speed will equal the distance travelled divided by the time travelled. Thus, the average speed of the delivery truck equals $50 \div 1\frac{1}{4} = 50 \div \frac{5}{4} = 50 \times \frac{4}{5} = 40$ km/h.

Therefore the average speed of the delivery truck is 40 km/h.

The calculations in this problem could be done using decimals by converting one and one-quarter hours to 1.25 hours.