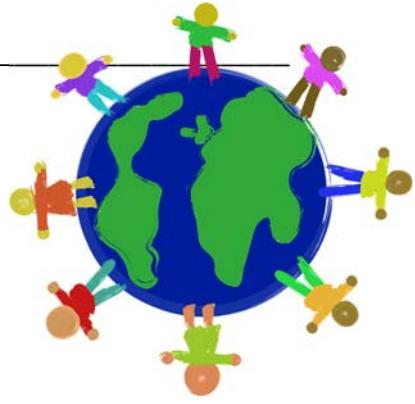


Name \_\_\_\_\_



## Around the World in 80 Hours

### Key ideas

Average speed = Total distance  $\div$  Total time

For each leg of a journey, Distance = Speed  $\times$  Time

### Part A: Simple Two-Leg Trips

1. A pilot flies 600 km at 300 km/h and then 400 km at 200 km/h. What is the average speed for the entire 1,000 km journey?
2. A car travels 200 km at 80 km/h and then 100 km at 50 km/h. Calculate the total time taken and the overall average speed.
3. A train covers 120 km in 2 hours, stops for 30 minutes, and then travels another 180 km in 3 hours. What is its average speed, including the stop?

### Part B: Multi-leg Journeys

4. A traveler goes 300 km by car at 75 km/h, then 600 km by plane at 300 km/h, and finally 100 km by bus at 50 km/h. Find the total travel time and the overall average speed.
5. A cargo ship sails 240 km with the current at 40 km/h and returns at 30 km/h. What is the average speed for the round trip?
6. A cyclist rides 20 km uphill at 10 km/h and then 20 km downhill at 40 km/h. Find the cyclist's average speed for the entire route.

### Part C: Average Speed in Mixed Conditions

7. A delivery van spends 2 hours in city traffic at 30 km/h and then 3 hours on the highway at 90 km/h. Find the overall average speed.
8. A small airplane flies 400 km in 2 hours, refuels for 30 minutes, and then continues for another 600 km in 3 hours. What is its average speed for the entire trip, including the refueling time?
9. A bus makes three stops along a 300 km route:

#1 - 100 km at 50 km/h, #2 - 100 km at 60 km/h, #3 - 100 km at 40 km/h

What is the average speed for the total trip?

### Part D: Challenge

10. A plane flies 1,200 km at 400 km/h and returns at 300 km/h. What is the average speed for the round trip?