## Fraction word problems (unit fraction)

1. A computer uses $\frac{1}{200}$ of a second to finish a math question. How many math questions can the computer answer in 2 minutes?
2. After a robot vacuum is fully charged, it can run for 15 minutes. It can vacuum $\frac{1}{2}$ square foot every second. Can a fully charged robot clean a room that is 400 square feet without recharging?
3. An auto shop installed a new automatic system to do paint jobs for cars. The system can paint 6 cars in $\frac{1}{4}$ hour. How long does it take to paint one car?

4. The distance between the first and the last stop of a bus route is $\frac{1}{3}$ miles. Including the first and the last stop, there are 5 stops on this route. What is the average distance between the stops?
5. Before taking off, a plane travels at a speed of $\frac{1}{4} \mathrm{~km}$ per second. The runway is 5 km . How many seconds does it take the plane to get to the end of the runway?
6. It takes the city train 5 hours to go from the first stop to the last stop. The actual travelling time is 3 hours and the train stops at each stop for $\frac{1}{15}$ hour. How many stops are there?

## Answers

1. $60 \times 2 \div \frac{1}{200}=24,000$

The computer can answer 24,000 math questions in 2 minutes.
2. $400 \div \frac{1}{2} \div 60=13 \frac{1}{3}$

A room that is 400 square feet will take $13 \frac{1}{3}$ minutes to clean.
Yes, a fully charged robot can clean a room that is 400 square feet without recharging.
3. $\frac{1}{4} \div 6=\frac{1}{24}$

It takes $\frac{1}{24}$ hour to paint one car.
4. $\frac{1}{3} \div 4=\frac{1}{12}$

The average distance between the stops is $\frac{1}{12}$ miles.
5. $5 \div \frac{1}{4}=20$

It takes the plane 20 seconds to get to the end of the runway.
6. $(5-3) \div \frac{1}{20}=40$

There are 40 stops.

