

[11-11-30-T]

Speed

[1] Alice drove 200 miles in 4 hours. She drove at a uniform speed of 60 mph for the the first $\frac{3}{4}$ of her journey. How long did she take to drive the remaining $\frac{1}{4}$ of her journey?

[2] Sarah bicycles 14 miles. She covers the first 6 miles of the journey at an average speed of 18 mph. Her average speed for the rest of her journey was 12 mph. What was Sarah's average speed for the entire journey?

[3] Points A and B are 120 miles apart. Al travels from A to B at a uniform speed of 60 mph. On the return trip from B to A, he travels at a uniform speed of 30 mph. Find Al's average speed for the entire round trip.

[4] A police officer is pursuing a robber. The officer is driving at a uniform speed of 120 mph, the robber at a uniform speed of 90 mph. When observed at 1:00 PM, the robber was 30 miles ahead of the police officer. At what time does the police officer catch up to the robber?

[5] Imagine a two lane highway with one lane East bound and the other lane West bound. Car 1 is headed East at a constant speed of 60 mph. Car 2 headed West at a constant speed of 90 mph. Points A and B on this highway are 600 miles apart. At the instant Car 1 passes point A, Car 2 passes point B.

[a] When are the cars 300 miles apart?

[b] When do the cars pass each other?

[c] When are the cars 1200 miles apart?