

Distance Problems
Unit 5: Real World Applications

Solve each question. Round your answer to the nearest hundredth when needed.

1. A passenger train left Miami and traveled north at an average speed of 50 km/h. A cattle train left one hour later and traveled in the opposite direction with an average speed of 50 km/h. How long does the cattle train need to travel before the trains are 1150 km apart?

2. A freight train left Champaign and traveled toward the fueling station at an average speed of 10 mph. A diesel train left at the same time and traveled in the opposite direction with an average speed of 90 mph. How long does the diesel train need to travel before the trains are 500 miles apart?

3. Anne left the movie theater at the same time as Sam. They traveled in opposite directions. Sam traveled at a speed of 80 mph. After four hours they were 560 miles apart. How fast did Anne travel?

4. Mia left the hospital and traveled toward the town hall at an average speed of 21 mph. Chelsea left sometime later traveling in the opposite direction with an average speed of 35 mph. After Mia had traveled for 4.5 hours, they were 210 miles apart. How long did Chelsea travel?

5. Mo left school and drove toward the ferry office at an average speed of 32.8 km/h. Amy left at the same time and drove in the opposite direction with an average speed of 39.8 km/h. How long does Amy need to drive before they are 326.7 km apart?

6. A freight train left Miami traveling north 6.7 hours before a diesel train. The diesel train traveled in the opposite direction going 21.3 mph faster than the freight train for five hours after which time the trains were 373.7 miles apart. How fast did the freight train travel?

7. Amanda traveled to her friend's house and back. It took three hours longer to get there than it did to come back. The average speed on the trip there was 24 km/h. The average speed on the way back was 60 km/h. How many hours did the trip there take?

8. A diesel train traveled to the repair yards and back. On the trip there it traveled 20 km/h and on the return trip it went 50 km/h. How long did the trip there take if the return trip took six hours?

9. A freight train made a trip to New York and back. The trip there took six hours, and the trip back took five hours. It averaged 14 km/h faster on the return trip than on the outbound trip. What was the freight train's average speed on the outbound trip?

10. A cattle train traveled to the outer-most station and back. It took 2.6 hours longer to get there than it did to come back. The average speed on the trip there was 38 mph. The average speed on the way back was 45.6 mph. How many hours did the trip there take?

11. Stefan traveled to the train station and back. It took 0.8 hours less time to get there than it did to get back. The average speed on the trip there was 52.2 mph. The average speed on the way back was 45 mph. How many hours did the trip there take?

12. Ryan drove to the ferry office and back. The trip there took 3.5 hours, and the trip back took four hours. He averaged 31.5 mph on the return trip. Find the average speed of the trip there.

13. A passenger train left Berlin and traveled toward the outer-most station at the average speed of 15 km/h. A cattle train left sometime later traveling in the same direction at an average speed of 25 km/h. After traveling for six hours the cattle train caught up with the passenger train. Find the number of hours the passenger train traveled before the cattle train caught up.

14. A jet left Los Angeles and flew toward the airshow at an average speed of 228 km/h. A passenger plane left sometime later flying in the same direction at an average speed of 380 km/h. After flying for six hours the passenger plane caught up with the jet. How long did the jet fly before the passenger plane caught up?

15. DeShawn left the White House and traveled toward his cabin on the lake. Mike left one hour later traveling 20 mph faster in an effort to catch up to him. After two hours Mike finally caught up. What was DeShawn's average speed?

16. A jet left Tokyo and flew toward Istanbul at an average speed of 261 km/h. A passenger plane left 0.8 hours later and flew in the same direction but with an average speed of 297 km/h. How long did the jet fly before the passenger plane caught up?

17. A jet left the airport and flew east at an average speed of 150.5 mph. Sometime later an Air Force plane left flying in the same direction but at an average speed of 481.6 mph. After flying for three hours the Air Force plane caught up with the jet. How long did the jet fly before the Air Force plane caught up?

18. Daniel left the mall and traveled north. Sammy left 2.4 hours later traveling at 54.5 mph in an effort to catch up to Daniel. After traveling for 1.6 hours Sammy finally caught up. What was Daniel's average speed?