

Round all distance to the nearest tenth.

1. The bearing from A to B is  $250^\circ$ . Find the bearing from B to A.
2. The bearing from A to B is  $046^\circ$ . Find the bearing from B to A.
3. Town B is 12 km from village A on a bearing of  $040^\circ$  from A. City C is 8 km from B on a bearing of  $290^\circ$  from B. Find the distance from A to C.
4. Town B is 10 km northwest from village A. City C is 15 km from B on a bearing of  $245^\circ$  from B. Find the distance from A to C.
5. A ship proceeds on a course of  $130^\circ$  for 3 hours at a speed of 15 knots (1 knot=1 nautical mph). Then it changes course to  $200^\circ$ , continuing at 15 knots for 2 more hours. At that time, how far is the ship from its starting point?
6. Ship A left the dock at 10 am at a speed of 10 knots on a course of  $330^\circ$ . Ship B leaves an hour later and travels from the same dock at a speed of 12 knots on a course of  $075^\circ$ . At 2pm how far apart are they?
7. A fishing boat adrift at sea indicated its position as 18 miles on a bearing of  $060^\circ$  from a coast guard station. A coast guard patrol boat indicated its position as 15 miles on a bearing of  $320^\circ$  of the coast guard station. To the nearest mile, how far was the patrol boat from the fishing boat?
8. Two hikers follow a trail that splits into two forks. Each hiker takes a different fork. The forks diverge at an angle of  $82^\circ$  and both hikers walk at a speed of 4 mi/h. How far apart are the hikers after 2 hours?
9. After leaving an airport, a plane flies for 2h at a speed of 280 km/h on a course of  $290^\circ$ . Then on a course of  $058^\circ$ , the plane flies for 1.5 h at a speed of 300 km/h. At this time, how far from the airport is the plane?

Answers:

1.  $070^\circ$
2.  $226^\circ$
3. 11.9 km
4. 20.7 km
5. 62.0 nautical miles
6. 60.3 nautical miles
7. 25.4 nautical miles
8. 10.5 mi
9. 453.7 km