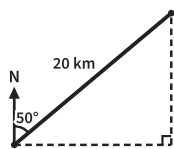


Trigonometry and bearings



1

A ship sails 20 km on a bearing of 050° . How far east of its start is it? Give your answer to 1 decimal place.



Use **SOH**

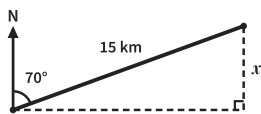
$$x = 20 \times \sin 50^\circ$$

$$x = \quad \text{km}$$

Answer _____

2

A ship sails 15 km on a bearing of 070° . How far north of its start is it? Give your answer to 1 decimal place.



Use **CAH**

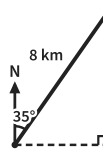
$$x = 15 \times \cos 70^\circ$$

$$x = \quad \text{km}$$

Answer _____

3

A ship sails 8 km on a bearing of 035° . How far east of its start is it? Give your answer to 1 decimal place.



Use **SOH**

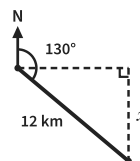
$$x = 8 \times \sin 35^\circ$$

$$x = \quad \text{km}$$

Answer _____

4

A ship sails 12 km on a bearing of 130° . How far south of its start is it? Give your answer to 1 decimal place. The angle in the triangle is $180^\circ - 130^\circ$.

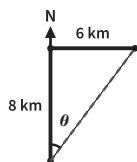


$$x = \quad \text{km}$$

Answer _____

5

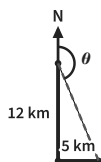
Kim walks 8 km north and then 6 km east. On what bearing is she from her start? Give it to the nearest degree.



Answer _____

6

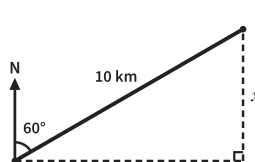
B is 12 km south and 5 km east of A. Find the bearing of B from A to the nearest degree.



Answer _____

7

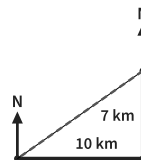
B is 10 km from A on a bearing of 060° . How far north of A is B? What is the bearing of A from B?



Answer _____

8

A drone flies 10 km due east and then 7 km due north. On what bearing must it fly to get straight back? Give it to the nearest degree.



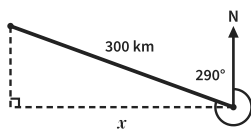
Answer _____

Trigonometry and bearings *further practice*



9

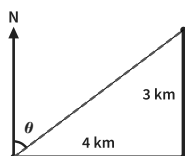
A plane flies 300 km on a bearing of 290° . How far west of its start is it? Give your answer to 1 decimal place.



Answer _____

10

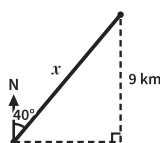
A boat is 4 km east and 3 km north of a lighthouse. How far is it from the lighthouse, and on what bearing?



Answer _____

11

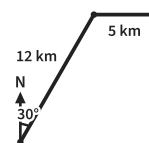
A ship is 9 km north of a port, on a bearing of 040° from it. How far is the ship from the port? Give your answer to 1 decimal place.



Answer _____

12

A walker goes 12 km on a bearing of 030° , then 5 km due east. How far is she from her start? Give your answer to 1 decimal place.



Answer _____

13

Ship A is 8 km due north of a port. Ship B is 6 km due east of the port. Find the bearing of B from A to the nearest degree.

Answer _____

14

A point is 7 km west and 7 km north of a town. What is its bearing from the town?

Answer _____

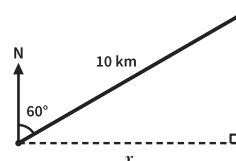
15

A walker is 4 km south and 9 km west of her camp. On what bearing must she walk to reach the camp?

Answer _____

16

Tom says a ship that sails 10 km on a bearing of 060° has gone $10 \times \cos 60^\circ = 5$ km east. Explain his mistake.



Answer _____