4.19 Bearings and Scale: 1-hour Pack

Calculators not allowed · about 60 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A ship sails from port P on a bearing of 293°. It then turns and sails directly back to P. On what bearing does it sail on the return journey? Give your answer as a three-figure bearing.

(2)

2 The bearing of B from A is 248°. Work out the bearing of A from B.

(2)

3 On a map, 1 cm represents 0.1 km. A road is 7.8 cm long on the map. Work out the real length of the road in kilometres.

(2)

4 The bearing of B from A is 025°. The bearing of C from B is 195°. Work out the size of angle ABC.

(3)

© Revision Library | revisionlibrary.co.uk

5 A map has a scale of 1 : 100000. Two towns are 9.5 cm apart on the map. Work out the real distance between the towns. Give your answer in km.

(2)

---

6 Write down the bearing from P to Q if Q is 45 degrees clockwise from north of P.

(2)

---

7 On a map, 1 cm represents 0.05 km. A road is 1.5 cm long on the map. Work out the real length of the road in kilometres.

(2)

---

8 The bearing of B from A is 092°. The bearing of C from B is 319°. Work out the size of angle ABC.

(3)

---

9 The bearing of B from A is 198°. Work out the bearing of A from B.

(2)

---

10 Write down the three-figure bearing of South.

(1)

© Revision Library | revisionlibrary.co.uk

11 A ship sails from port P on a bearing of 090°. It then turns and sails directly back to P. On what bearing does it sail on the return journey? Give your answer as a three-figure bearing.

(2)

---

12 The bearing of B from A is 095°. The bearing of C from B is 298°. Work out the size of angle ABC.

(3)

---

13 Write down the three-figure bearing of North East.

(1)

---

14 A scale drawing uses a scale of 5 cm to 20 m. A building is 420 m tall. How tall is the building on the drawing?

(2)

---

15 A ship sails from port M on a bearing of 215. What is the bearing back from the ship to port M?

(2)

© Revision Library | revisionlibrary.co.uk

16 The bearing of B from A is 133°. Work out the bearing of A from B.

(2)

---

17 A map has a scale of 1 : 25000. A lake is 5.2 cm wide on the map. Work out its real width in metres.

(3)

---

18 The bearing of B from A is 051°. The bearing of C from B is 261°. Work out the size of angle ABC.

(3)

---

19 A walker is facing North West and turns clockwise through 270°. In which direction is the walker now facing? Give the compass direction.

(2)

© Revision Library | revisionlibrary.co.uk

20 On a map, road R goes from village V to town T. The bearing from V to T is 328. A cyclist at V rides on a bearing of 050 for a while. Calculate the smaller angle between the cyclist's direction and the direction to T from V.

(3)

---

21 A scale drawing uses a scale of 2 cm to 20 m. Write the scale in the form 1 : n.

(3)

© Revision Library | revisionlibrary.co.uk

Mark scheme · 4.19 Bearings and Scale: 1-hour Pack

Question 1

293 - 180	M1
113° cao	A1

Answer: **113°**

Question 2

248 - 180	M1
068° cao	A1

Answer: **068°**

Question 3

7.8 x 0.1	M1
0.78 km cao	A1

Answer: **0.78 km**

Question 4

bearing of A from B = 205°	M1
difference between 205 and 195 (and a reflex angle converted if needed)	M1
10° cao	A1

Answer: **10°**

Question 5

9.5 x 100000	M1
9.5 km cao	A1

Answer: **9.5 km**

Question 6

understands bearing measured clockwise from north and calculates 0 + 45 = 045	M1
045 cao	A1

Answer: **045**

Question 7

1.5 x 0.05	M1
0.075 km cao	A1

Answer: **0.075 km**

Question 8

bearing of A from B = 272°	M1
difference between 272 and 319 (and a reflex angle converted if needed)	M1
47° cao	A1

Answer: **47°**

Question 9

198 - 180	M1
018° cao	A1

Answer: **018°**

Question 10

180° cao	B1

Answer: **180°**

Question 11

90 + 180	M1
270° cao	A1

Answer: **270°**

Question 12

bearing of A from B = 275°	M1
difference between 275 and 298 (and a reflex angle converted if needed)	M1
23° cao	A1

Answer: **23°**

Question 13

045° cao	B1

Answer: **045°**

Question 14

420 ÷ 20 x 5	M1
105 cm cao	A1

Answer: **105 cm**

Question 15

adds or subtracts 180 degrees to find opposite direction: 215 - 180 = 35 or 215 + 180 = 395 then convert	M1
035 cao	A1

Answer: **035**

Question 16

133 + 180	M1
313° cao	A1

Answer: **313°**

Question 17

5.2 x 25000	M1
converts cm to m by ÷ 100	M1
1300 m cao	A1

Answer: **1300 m**

Question 18

bearing of A from B = 231°	M1
difference between 231 and 261 (and a reflex angle converted if needed)	M1
30° cao	A1

Answer: **30°**

Question 19

315 + 270 = 585 (mod 360)	M1
South West cao	A1

Answer: **South West**

© Revision Library | revisionlibrary.co.uk

Question 20

method to find difference using clockwise bearings: 050 - 328 or add 360 then subtract gives 82	**M1**
identifies need to take smaller angle (82 is less than 278) oe	**M1**
82 degrees cao	**A1**

Answer: **82 degrees**

Question 21

20 m = 2000 cm	**M1**
2000 ÷ 2	**M1**
1 : 1000 cao	**A1**

Answer: **1 : 1000**

© Revision Library | revisionlibrary.co.uk