2.5 Geometry and Measures: 2-hour Pack

ISEB CE.M5 · Calculator allowed · about 120 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 The bearing of M from W is 340 degrees. What is the bearing of W from M?

- [ ] A) 200
- [ ] B) 160
- [ ] C) 340
- [ ] D) 070
- [ ] E) 250

---

2 A block of alloy D has mass 90 g and volume 10 cm³. Find its density.

- [ ] A) 0.11 g/cm^3
- [ ] B) 900 g/cm^3
- [ ] C) 0.90 g/cm^3
- [ ] D) 80 g/cm^3
- [ ] E) 9 g/cm^3

---

3 In a triangle, two of the interior angles are 31 degrees and 64 degrees. One side is extended to make an exterior angle at the third corner. What is the size of this exterior angle?

- [ ] A) 265 degrees
- [ ] B) 105 degrees
- [ ] C) 85 degrees
- [ ] D) 95 degrees
- [ ] E) 149 degrees

© Revision Library | revisionlibrary.co.uk

4 Convert 63 cm to mm.

- [ ] A) 6.3 mm
- [ ] B) 630 mm
- [ ] C) 63000 mm
- [ ] D) 63 mm
- [ ] E) 6300 mm

---

5 From a lighthouse, the bearing of a buoy is 195 degrees and the bearing of a rock is 325 degrees. What is the angle between the two directions, as seen from the lighthouse?

- [ ] A) 160 degrees
- [ ] B) 50 degrees
- [ ] C) 130 degrees
- [ ] D) 230 degrees
- [ ] E) 140 degrees

---

6 A block of alloy B has mass 468 g and volume 60 cm^3. Find its density.

- [ ] A) 7.8 g/cm^3
- [ ] B) 0.78 g/cm^3
- [ ] C) 408 g/cm^3
- [ ] D) 78 g/cm^3
- [ ] E) 28080 g/cm^3

---

7 An isosceles triangle has two equal angles of 79 degrees. What is the size of the third angle?

- [ ] A) 202 degrees
- [ ] B) 32 degrees
- [ ] C) 79 degrees
- [ ] D) 22 degrees
- [ ] E) 101 degrees

© Revision Library | revisionlibrary.co.uk

8 Convert 7.6 kg to g.

- [ ] A) 760000 g
- [ ] B) 760 g
- [ ] C) 76000 g
- [ ] D) 76 g
- [ ] E) 7600 g

---

9 From a lighthouse, the bearing of a buoy is 045 degrees and the bearing of a rock is 195 degrees. What is the angle between the two directions, as seen from the lighthouse?

- [ ] A) 30 degrees
- [ ] B) 160 degrees
- [ ] C) 150 degrees
- [ ] D) 140 degrees
- [ ] E) 60 degrees

---

10 Alloy D has a density of 5.5 g/cm^3. What volume of alloy D has a mass of 110 g?

- [ ] A) 104.5 cm³
- [ ] B) 20 cm³
- [ ] C) 115.5 cm³
- [ ] D) 200 cm³
- [ ] E) 2 cm³

---

11 An isosceles triangle has an angle of 152 degrees between its two equal sides. What is the size of each of the other two angles?

- [ ] A) 14 degrees
- [ ] B) 76 degrees
- [ ] C) 28 degrees
- [ ] D) 152 degrees
- [ ] E) 24 degrees

© Revision Library | revisionlibrary.co.uk

12 Convert 6.5 km to m.

- [ ] A) 650000 m
- [ ] B) 6500 m
- [ ] C) 65 m
- [ ] D) 650 m
- [ ] E) 65000 m

---

13 A block of alloy C has mass 800 g and volume 200 cm³. Find its density.

- [ ] A) 600 g/cm^3
- [ ] B) 0.25 g/cm^3
- [ ] C) 0.40 g/cm^3
- [ ] D) 40 g/cm^3
- [ ] E) 4 g/cm^3

---

14 In a triangle, two of the interior angles are 47 degrees and 25 degrees. One side is extended to make an exterior angle at the third corner. What is the size of this exterior angle?

- [ ] A) 108 degrees
- [ ] B) 22 degrees
- [ ] C) 62 degrees
- [ ] D) 72 degrees
- [ ] E) 288 degrees

---

15 Convert 3.1 hours to minutes.

- [ ] A) 186 minutes
- [ ] B) 310 minutes
- [ ] C) 196 minutes
- [ ] D) 18.6 minutes
- [ ] E) 1860 minutes

© Revision Library | revisionlibrary.co.uk

16 From a lighthouse, the bearing of a buoy is 295 degrees and the bearing of a rock is 090 degrees. What is the angle between the two directions, as seen from the lighthouse?

- [ ] A) 145 degrees
- [ ] B) 25 degrees
- [ ] C) 205 degrees
- [ ] D) 155 degrees
- [ ] E) 165 degrees

---

17 A block of alloy A has mass 600 g and volume 200 cm^3. Find its density.

- [ ] A) 400 g/cm^3
- [ ] B) 3 g/cm^3
- [ ] C) 120000 g/cm^3
- [ ] D) 0.33 g/cm^3
- [ ] E) 30 g/cm^3

---

18 The three angles of a triangle are (2x - 2) degrees, (3x + 19) degrees, (3x + 35) degrees. Find the size of the largest angle.

- [ ] A) 83 degrees
- [ ] B) 73 degrees
- [ ] C) 93 degrees
- [ ] D) 30 degrees
- [ ] E) 97 degrees

---

19 Convert 85 cm to mm.

- [ ] A) 8.5 mm
- [ ] B) 85000 mm
- [ ] C) 8500 mm
- [ ] D) 85 mm
- [ ] E) 850 mm

© Revision Library | revisionlibrary.co.uk

20 The bearing of Y from S is 280 degrees. What is the bearing of S from Y?

- [ ] A) 280
- [ ] B) 080
- [ ] C) 100
- [ ] D) 190
- [ ] E) 260

---

21 A block of resin has mass 90 g and volume 50 cm^3. Find its density.

- [ ] A) 18 g/cm^3
- [ ] B) 1.8 g/cm^3
- [ ] C) 40 g/cm^3
- [ ] D) 4500 g/cm^3
- [ ] E) 0.56 g/cm^3

---

22 In a triangle, two of the interior angles are 51 degrees and 60 degrees. One side is extended to make an exterior angle at the third corner. What is the size of this exterior angle?

- [ ] A) 69 degrees
- [ ] B) 121 degrees
- [ ] C) 101 degrees
- [ ] D) 111 degrees
- [ ] E) 249 degrees

---

23 Convert 2.1 hours to minutes.

- [ ] A) 136 minutes
- [ ] B) 12.6 minutes
- [ ] C) 126 minutes
- [ ] D) 1260 minutes
- [ ] E) 210 minutes

© Revision Library | revisionlibrary.co.uk

24 The bearing of Y from U is 195 degrees. What is the bearing of U from Y?

- [ ] A) 345
- [ ] B) 105
- [ ] C) 195
- [ ] D) 285
- [ ] E) 015

---

25 A block of alloy B has mass 300 g and volume 150 cm³. Find its density.

- [ ] A) 2 g/cm^3
- [ ] B) 0.20 g/cm^3
- [ ] C) 150 g/cm^3
- [ ] D) 0.50 g/cm^3
- [ ] E) 20 g/cm^3

---

26 An isosceles triangle has an angle of 62 degrees between its two equal sides. What is the size of each of the other two angles?

- [ ] A) 62 degrees
- [ ] B) 69 degrees
- [ ] C) 31 degrees
- [ ] D) 28 degrees
- [ ] E) 59 degrees

---

27 Convert 6000000 m² to km^2.

- [ ] A) 0.6 km²
- [ ] B) 6 km²
- [ ] C) 60 km²
- [ ] D) 6000000000000 km²
- [ ] E) 600 km²

© Revision Library | revisionlibrary.co.uk

28 A block of alloy B has mass 1900 g and volume 200 cm³. Find its density.

- [ ] A) 0.11 g/cm^3
- [ ] B) 95 g/cm^3
- [ ] C) 9.5 g/cm^3
- [ ] D) 1700 g/cm^3
- [ ] E) 0.95 g/cm^3

---

29 An isosceles triangle has an angle of 134 degrees between its two equal sides. What is the size of each of the other two angles?

- [ ] A) 23 degrees
- [ ] B) 67 degrees
- [ ] C) 134 degrees
- [ ] D) 33 degrees
- [ ] E) 46 degrees

---

30 Convert 0.39 kg to g.

- [ ] A) 39 g
- [ ] B) 390 g
- [ ] C) 39000 g
- [ ] D) 3900 g
- [ ] E) 3.9 g

---

31 The bearing of M from Q is 170 degrees. What is the bearing of Q from M?

- [ ] A) 350
- [ ] B) 170
- [ ] C) 010
- [ ] D) 080
- [ ] E) 260

© Revision Library | revisionlibrary.co.uk

32 A block of alloy A has mass 700 g and volume 200 cm³. Find its density.

- [ ] A) 35 g/cm^3
- [ ] B) 0.29 g/cm^3
- [ ] C) 0.35 g/cm^3
- [ ] D) 500 g/cm^3
- [ ] E) 3.5 g/cm^3

---

33 An isosceles triangle has two equal angles of 66 degrees. What is the size of the third angle?

- [ ] A) 58 degrees
- [ ] B) 38 degrees
- [ ] C) 48 degrees
- [ ] D) 66 degrees
- [ ] E) 24 degrees

---

34 Convert 0.76 kg to g.

- [ ] A) 76000 g
- [ ] B) 76 g
- [ ] C) 7.6 g
- [ ] D) 760 g
- [ ] E) 7600 g

---

35 A block of alloy B has mass 1600 g and volume 200 cm³. Find its density.

- [ ] A) 8 g/cm^3
- [ ] B) 0.13 g/cm^3
- [ ] C) 80 g/cm^3
- [ ] D) 0.80 g/cm^3
- [ ] E) 320000 g/cm^3

---

36 An isosceles triangle has two equal angles of 59 degrees. What is the size of the third angle?

- [ ] A) 121 degrees
- [ ] B) 31 degrees
- [ ] C) 62 degrees
- [ ] D) 72 degrees
- [ ] E) 242 degrees

© Revision Library | revisionlibrary.co.uk

37 Convert 2.3 kg to g.

- [ ] A) 230 g
- [ ] B) 2300 g
- [ ] C) 23 g
- [ ] D) 230000 g
- [ ] E) 23000 g

---

38 The bearing of N from W is 145 degrees. What is the bearing of W from N?

- [ ] A) 235
- [ ] B) 035
- [ ] C) 215
- [ ] D) 325
- [ ] E) 055

---

39 Alloy D has a density of 7.8 g/cm^3. What volume of alloy D has a mass of 156 g?

- [ ] A) 200 cm³
- [ ] B) 20 cm³
- [ ] C) 2 cm³
- [ ] D) 148.2 cm³
- [ ] E) 1216.8 cm³

---

40 In a triangle, two of the interior angles are 71 degrees and 32 degrees. One side is extended to make an exterior angle at the third corner. What is the size of this exterior angle?

- [ ] A) 113 degrees
- [ ] B) 109 degrees
- [ ] C) 103 degrees
- [ ] D) 77 degrees
- [ ] E) 93 degrees

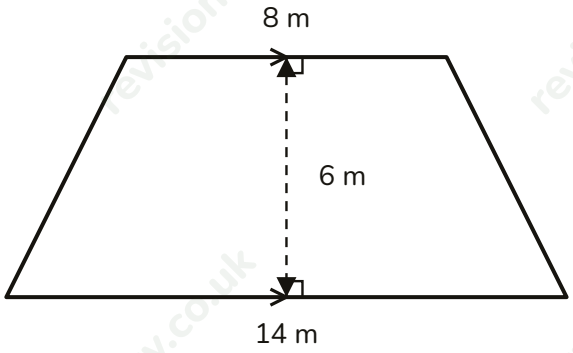
© Revision Library | revisionlibrary.co.uk

41 Convert 40 km to m.

- ☐ A) 40000 m
- ☐ B) 4000000 m
- ☐ C) 4000 m
- ☐ D) 400 m
- ☐ E) 0.04 m

---

42 A garden is trapezium-shaped with parallel sides of 8 m and 14 m, with a perpendicular distance of 6 m between them.



(a) Calculate the area of the garden. **(3)**

.....

(b) Turf costs £4.50 per square metre. Calculate the total cost of turfing the whole garden. **(2)**

.....

---

43 Resin has a density of 5 g/cm^3. Find the mass of 25 cm³ of resin.

- ☐ A) 12.5 g
- ☐ B) 30 g
- ☐ C) 5.00 g
- ☐ D) 20 g
- ☐ E) 125 g

© Revision Library | revisionlibrary.co.uk

44 In a triangle, two of the interior angles are 68 degrees and 42 degrees. One side is extended to make an exterior angle at the third corner. What is the size of this exterior angle?

- ☐ A) 100 degrees
- ☐ B) 110 degrees
- ☐ C) 120 degrees
- ☐ D) 70 degrees
- ☐ E) 112 degrees

---

45 Convert 4.6 m to mm.

- ☐ A) 4600 mm
- ☐ B) 460000 mm
- ☐ C) 46000 mm
- ☐ D) 46 mm
- ☐ E) 460 mm

---

46 The bearing of Y from W is 155 degrees. What is the bearing of W from Y?

- ☐ A) 155
- ☐ B) 025
- ☐ C) 065
- ☐ D) 205
- ☐ E) 335

---

47 Plastic has a density of 9.5 g/cm^3. What volume of plastic has a mass of 760 g?

- ☐ A) 800 cm³
- ☐ B) 750.5 cm³
- ☐ C) 80 cm³
- ☐ D) 769.5 cm³
- ☐ E) 8 cm³

© Revision Library | revisionlibrary.co.uk

48 An isosceles triangle has two equal angles of 64 degrees. What is the size of the third angle?

- ☐ A) 62 degrees
- ☐ B) 232 degrees
- ☐ C) 116 degrees
- ☐ D) 52 degrees
- ☐ E) 26 degrees

---

49 Convert 4.1 km to m.

- ☐ A) 41 m
- ☐ B) 410000 m
- ☐ C) 4100 m
- ☐ D) 41000 m
- ☐ E) 410 m

---

50 The bearing of N from R is 075 degrees. What is the bearing of R from N?

- ☐ A) 255
- ☐ B) 165
- ☐ C) 345
- ☐ D) 105
- ☐ E) 285

---

51 Alloy C has a density of 4 g/cm^3. Find the mass of 100 cm³ of alloy C.

- ☐ A) 40 g
- ☐ B) 4000 g
- ☐ C) 25.00 g
- ☐ D) 400 g
- ☐ E) 96 g

© Revision Library | revisionlibrary.co.uk

52 From a lighthouse, the bearing of a buoy is 020 degrees and the bearing of a rock is 115 degrees. What is the angle between the two directions, as seen from the lighthouse?

- ☐ A) 135 degrees
- ☐ B) 85 degrees
- ☐ C) 265 degrees
- ☐ D) 95 degrees
- ☐ E) 105 degrees

---

53 A block of alloy D has mass 760 g and volume 80 cm^3. Find its density.

- ☐ A) 60800 g/cm^3
- ☐ B) 9.5 g/cm^3
- ☐ C) 95 g/cm^3
- ☐ D) 680 g/cm^3
- ☐ E) 0.95 g/cm^3

---

54 The three angles of a triangle are (2x + 15) degrees, (2x + 10) degrees, (3x + 36) degrees. Find the size of the largest angle.

- ☐ A) 87 degrees
- ☐ B) 97 degrees
- ☐ C) 93 degrees
- ☐ D) 77 degrees
- ☐ E) 44 degrees

---

55 Convert 59 cm to mm.

- ☐ A) 5900 mm
- ☐ B) 59 mm
- ☐ C) 5.9 mm
- ☐ D) 59000 mm
- ☐ E) 590 mm

© Revision Library | revisionlibrary.co.uk

56 The bearing of M from T is 290 degrees. What is the bearing of T from M?

- [ ] A) 020
- [ ] B) 200
- [ ] C) 110
- [ ] D) 070
- [ ] E) 290

---

57 The three angles of a triangle are (3x - 2) degrees, (x - 8) degrees, (x) degrees. Find the value of x.

- [ ] A) 36
- [ ] B) 34
- [ ] C) 37
- [ ] D) 38
- [ ] E) 74

---

58 Convert 4.7 km² to m^2.

- [ ] A) 47000000 m²
- [ ] B) 4700000 m²
- [ ] C) 4700 m²
- [ ] D) 47000 m²
- [ ] E) 470000 m²

---

59 The bearing of X from T is 015 degrees. What is the bearing of T from X?

- [ ] A) 105
- [ ] B) 285
- [ ] C) 165
- [ ] D) 345
- [ ] E) 195

© Revision Library | revisionlibrary.co.uk

60 Resin has a density of 3 g/cm^3. What volume of resin has a mass of 360 g?

- [ ] A) 1200 cm³
- [ ] B) 1080 cm³
- [ ] C) 363 cm³
- [ ] D) 120 cm³
- [ ] E) 12 cm³

---

61 In a triangle, two of the interior angles are 39 degrees and 62 degrees. One side is extended to make an exterior angle at the third corner. What is the size of this exterior angle?

- [ ] A) 101 degrees
- [ ] B) 259 degrees
- [ ] C) 141 degrees
- [ ] D) 79 degrees
- [ ] E) 111 degrees

---

62 Convert 0.15 kg to g.

- [ ] A) 1500 g
- [ ] B) 150 g
- [ ] C) 1.5 g
- [ ] D) 15 g
- [ ] E) 15000 g

---

63 From a lighthouse, the bearing of a buoy is 010 degrees and the bearing of a rock is 095 degrees. What is the angle between the two directions, as seen from the lighthouse?

- [ ] A) 105 degrees
- [ ] B) 275 degrees
- [ ] C) 85 degrees
- [ ] D) 75 degrees
- [ ] E) 95 degrees

© Revision Library | revisionlibrary.co.uk

64 In a triangle, two of the interior angles are 56 degrees and 60 degrees. One side is extended to make an exterior angle at the third corner. What is the size of this exterior angle?

- ☐ A) 126 degrees
- ☐ B) 106 degrees
- ☐ C) 244 degrees
- ☐ D) 124 degrees
- ☐ E) 116 degrees

---

65 Convert 0.91 kg to g.

- ☐ A) 9100 g
- ☐ B) 91 g
- ☐ C) 9.1 g
- ☐ D) 910 g
- ☐ E) 91000 g

---

66 From a lighthouse, the bearing of a buoy is 040 degrees and the bearing of a rock is 160 degrees. What is the angle between the two directions, as seen from the lighthouse?

- ☐ A) 20 degrees
- ☐ B) 60 degrees
- ☐ C) 120 degrees
- ☐ D) 240 degrees
- ☐ E) 110 degrees

---

67 Resin has a density of 2.5 g/cm^3. Find the mass of 40 cm³ of resin.

- ☐ A) 100 g
- ☐ B) 37.5 g
- ☐ C) 10 g
- ☐ D) 1000 g
- ☐ E) 16.00 g

© Revision Library | revisionlibrary.co.uk

68 An isosceles triangle has an angle of 102 degrees between its two equal sides. What is the size of each of the other two angles?

- [ ] A) 102 degrees
- [ ] B) 39 degrees
- [ ] C) 51 degrees
- [ ] D) 78 degrees
- [ ] E) 49 degrees

---

69 Convert 5.5 cm to mm.

- [ ] A) 0.55 mm
- [ ] B) 5500 mm
- [ ] C) 5.5 mm
- [ ] D) 55 mm
- [ ] E) 550 mm

---

70 The bearing of Y from P is 210 degrees. What is the bearing of P from Y?

- [ ] A) 300
- [ ] B) 030
- [ ] C) 120
- [ ] D) 330
- [ ] E) 210

---

71 The three angles of a triangle are (x + 2) degrees, (3x - 3) degrees, (2x + 25) degrees. Find the value of x.

- [ ] A) 30
- [ ] B) 27
- [ ] C) 26
- [ ] D) 25
- [ ] E) 56

© Revision Library | revisionlibrary.co.uk

72 Convert 2.1 cm^3 to mm^3.

- [ ] A) 2100 mm^3
- [ ] B) 21 mm^3
- [ ] C) 21000 mm^3
- [ ] D) 210 mm^3
- [ ] E) 210000 mm^3

---

73 A boat sails south-west. What is its bearing, as a three-figure bearing?

- [ ] A) 225
- [ ] B) 045
- [ ] C) 000
- [ ] D) 270
- [ ] E) 180

---

74 Alloy C has a density of 3.5 g/cm^3. Find the mass of 60 cm^3 of alloy C.

- [ ] A) 2100 g
- [ ] B) 210 g
- [ ] C) 21 g
- [ ] D) 17.14 g
- [ ] E) 63.5 g

---

75 In a triangle, two of the interior angles are 76 degrees and 27 degrees. One side is extended to make an exterior angle at the third corner. What is the size of this exterior angle?

- [ ] A) 104 degrees
- [ ] B) 93 degrees
- [ ] C) 113 degrees
- [ ] D) 103 degrees
- [ ] E) 49 degrees

© Revision Library | revisionlibrary.co.uk

76 Convert 300 mm² to cm^2.

- [ ] A) 30000 cm²
- [ ] B) 300 cm²
- [ ] C) 0.3 cm²
- [ ] D) 30 cm²
- [ ] E) 3 cm²

---

77 The bearing of Y from P is 260 degrees. What is the bearing of P from Y?

- [ ] A) 100
- [ ] B) 260
- [ ] C) 080
- [ ] D) 350
- [ ] E) 170

---

78 Resin has a density of 3.5 g/cm^3. Find the mass of 150 cm³ of resin.

- [ ] A) 146.5 g
- [ ] B) 525 g
- [ ] C) 52.5 g
- [ ] D) 5250 g
- [ ] E) 42.86 g

---

79 In a triangle, two of the interior angles are 48 degrees and 50 degrees. One side is extended to make an exterior angle at the third corner. What is the size of this exterior angle?

- [ ] A) 2 degrees
- [ ] B) 262 degrees
- [ ] C) 108 degrees
- [ ] D) 132 degrees
- [ ] E) 98 degrees

© Revision Library | revisionlibrary.co.uk

80 Convert 7.6 cm to mm.

- [ ] A) 7.6 mm
- [ ] B) 7600 mm
- [ ] C) 0.76 mm
- [ ] D) 76 mm
- [ ] E) 760 mm

---

81 The bearing of N from S is 335 degrees. What is the bearing of S from N?

- [ ] A) 155
- [ ] B) 335
- [ ] C) 245
- [ ] D) 205
- [ ] E) 065

---

82 Plastic has a density of 7.8 g/cm^3. Find the mass of 25 cm^3 of plastic.

- [ ] A) 3.21 g
- [ ] B) 32.8 g
- [ ] C) 195 g
- [ ] D) 17.2 g
- [ ] E) 19.5 g

---

83 In a triangle, two of the interior angles are 67 degrees and 69 degrees. One side is extended to make an exterior angle at the third corner. What is the size of this exterior angle?

- [ ] A) 146 degrees
- [ ] B) 2 degrees
- [ ] C) 126 degrees
- [ ] D) 136 degrees
- [ ] E) 113 degrees

© Revision Library | revisionlibrary.co.uk

84 Convert 2.1 kg to g.

- [ ] A) 21000 g
- [ ] B) 2100 g
- [ ] C) 210 g
- [ ] D) 21 g
- [ ] E) 210000 g

---

85 Alloy A has a density of 7.8 g/cm^3. Find the mass of 200 cm³ of alloy A.

- [ ] A) 192.2 g
- [ ] B) 156 g
- [ ] C) 207.8 g
- [ ] D) 15600 g
- [ ] E) 1560 g

---

86 In a triangle, two of the interior angles are 32 degrees and 56 degrees. One side is extended to make an exterior angle at the third corner. What is the size of this exterior angle?

- [ ] A) 88 degrees
- [ ] B) 92 degrees
- [ ] C) 98 degrees
- [ ] D) 272 degrees
- [ ] E) 78 degrees

---

87 Convert 4000000 m² to km^2.

- [ ] A) 40 km²
- [ ] B) 4000000000000 km²
- [ ] C) 4 km²
- [ ] D) 0.04 km²
- [ ] E) 400 km²

© Revision Library | revisionlibrary.co.uk

88 The bearing of M from S is 125 degrees. What is the bearing of S from M?

- [ ] A) 305
- [ ] B) 215
- [ ] C) 125
- [ ] D) 055
- [ ] E) 235

---

89 Plastic has a density of 2 g/cm^3. Find the mass of 60 cm^3 of plastic.

- [ ] A) 30.00 g
- [ ] B) 120 g
- [ ] C) 1200 g
- [ ] D) 12 g
- [ ] E) 62 g

---

90 In a triangle, two of the interior angles are 71 degrees and 29 degrees. One side is extended to make an exterior angle at the third corner. What is the size of this exterior angle?

- [ ] A) 80 degrees
- [ ] B) 90 degrees
- [ ] C) 110 degrees
- [ ] D) 109 degrees
- [ ] E) 100 degrees

---

91 Convert 20 m/s to km/h.

- [ ] A) 50/9 km/h
- [ ] B) 1/3 km/h
- [ ] C) 20000 km/h
- [ ] D) 72 km/h
- [ ] E) 1200 km/h

© Revision Library | revisionlibrary.co.uk

92 A boat sails south. What is its bearing, as a three-figure bearing?

- [ ] A) 270
- [ ] B) 000
- [ ] C) 180
- [ ] D) 315
- [ ] E) 045

---

93 Alloy B has a density of 9 g/cm^3. Find the mass of 10 cm³ of alloy B.

- [ ] A) 1.11 g
- [ ] B) 900 g
- [ ] C) 90 g
- [ ] D) 9 g
- [ ] E) 19 g

---

94 An isosceles triangle has two equal angles of 65 degrees. What is the size of the third angle?

- [ ] A) 65 degrees
- [ ] B) 40 degrees
- [ ] C) 25 degrees
- [ ] D) 50 degrees
- [ ] E) 60 degrees

---

95 Convert 5000000 m² to km^2.

- [ ] A) 0.05 km²
- [ ] B) 5000000000000 km²
- [ ] C) 500 km²
- [ ] D) 50 km²
- [ ] E) 5 km²

---

96 The bearing of Z from W is 310 degrees. What is the bearing of W from Z?

- [ ] A) 130
- [ ] B) 040
- [ ] C) 230
- [ ] D) 310
- [ ] E) 050

© Revision Library | revisionlibrary.co.uk

97 Alloy D has a density of 7.8 g/cm^3. Find the mass of 200 cm³ of alloy D.

- [ ] A) 156 g
- [ ] B) 1560 g
- [ ] C) 207.8 g
- [ ] D) 192.2 g
- [ ] E) 15600 g

---

98 An isosceles triangle has two equal angles of 37 degrees. What is the size of the third angle?

- [ ] A) 106 degrees
- [ ] B) 96 degrees
- [ ] C) 37 degrees
- [ ] D) 286 degrees
- [ ] E) 143 degrees

---

99 The bearing of Z from T is 285 degrees. What is the bearing of T from Z?

- [ ] A) 285
- [ ] B) 105
- [ ] C) 015
- [ ] D) 255
- [ ] E) 075

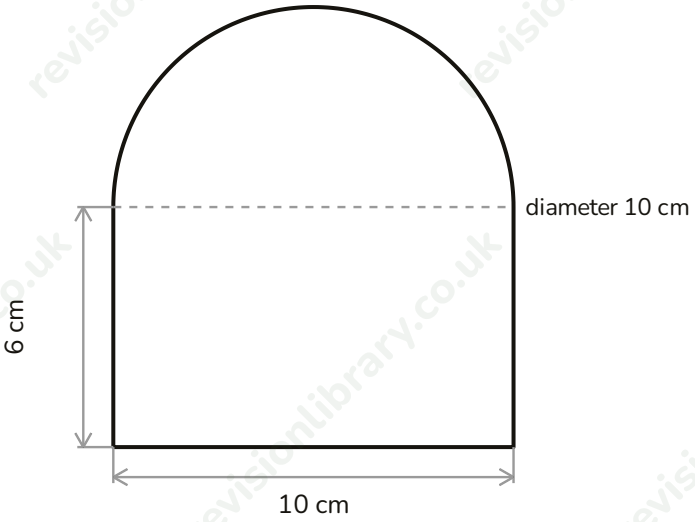
---

100 Alloy D has a density of 1.8 g/cm^3. Find the mass of 120 cm³ of alloy D.

- [ ] A) 66.67 g
- [ ] B) 121.8 g
- [ ] C) 216 g
- [ ] D) 3039929748475085/140737488355328 g
- [ ] E) 118.2 g

© Revision Library | revisionlibrary.co.uk

101 A shape is made from a rectangle 10 cm wide and 6 cm tall with a semicircle of diameter 10 cm on top.



(a) Calculate the total area of the shape, correct to 3 significant figures. **(4)**

.....

102 In a triangle, two of the interior angles are 38 degrees and 68 degrees. One side is extended to make an exterior angle at the third corner. What is the size of this exterior angle?

- ☐ A) 116 degrees
- ☐ B) 30 degrees
- ☐ C) 142 degrees
- ☐ D) 106 degrees
- ☐ E) 254 degrees

103 Convert 0.28 kg to g.

- ☐ A) 2800 g
- ☐ B) 28 g
- ☐ C) 28000 g
- ☐ D) 2.8 g
- ☐ E) 280 g

© Revision Library | revisionlibrary.co.uk

104 The bearing of Z from S is 325 degrees. What is the bearing of S from Z?

- [ ] A) 145
- [ ] B) 235
- [ ] C) 215
- [ ] D) 325
- [ ] E) 035

---

105 Alloy A has a density of 4 g/cm^3. Find the mass of 10 cm^3 of alloy A.

- [ ] A) 2.50 g
- [ ] B) 40 g
- [ ] C) 6 g
- [ ] D) 14 g
- [ ] E) 4 g

---

106 In a triangle, two of the interior angles are 27 degrees and 41 degrees. One side is extended to make an exterior angle at the third corner. What is the size of this exterior angle?

- [ ] A) 112 degrees
- [ ] B) 153 degrees
- [ ] C) 68 degrees
- [ ] D) 58 degrees
- [ ] E) 292 degrees

---

107 Convert 4.7 hours to minutes.

- [ ] A) 470 minutes
- [ ] B) 2820 minutes
- [ ] C) 28.2 minutes
- [ ] D) 282 minutes
- [ ] E) 352 minutes

© Revision Library | revisionlibrary.co.uk

108 The bearing of N from T is 050 degrees. What is the bearing of T from N?

- [ ] A) 130
- [ ] B) 140
- [ ] C) 230
- [ ] D) 320
- [ ] E) 050

---

109 A block of alloy C has mass 570 g and volume 60 cm^3. Find its density.

- [ ] A) 0.95 g/cm^3
- [ ] B) 0.11 g/cm^3
- [ ] C) 510 g/cm^3
- [ ] D) 9.5 g/cm^3
- [ ] E) 95 g/cm^3

---

110 An isosceles triangle has two equal angles of 60 degrees. What is the size of the third angle?

- [ ] A) 60 degrees
- [ ] B) 50 degrees
- [ ] C) 120 degrees
- [ ] D) 70 degrees
- [ ] E) 240 degrees

---

111 Convert 2.7 cm^3 to mm^3.

- [ ] A) 270000 mm^3
- [ ] B) 2700 mm^3
- [ ] C) 270 mm^3
- [ ] D) 27000 mm^3
- [ ] E) 27 mm^3

---

112 The bearing of N from R is 065 degrees. What is the bearing of R from N?

- [ ] A) 065
- [ ] B) 335
- [ ] C) 155
- [ ] D) 115
- [ ] E) 245

© Revision Library | revisionlibrary.co.uk

113 In a triangle, two of the interior angles are 40 degrees and 25 degrees. One side is extended to make an exterior angle at the third corner. What is the size of this exterior angle?

- [ ] A) 15 degrees
- [ ] B) 140 degrees
- [ ] C) 115 degrees
- [ ] D) 75 degrees
- [ ] E) 65 degrees

---

114 Convert 5 m/s to km/h.

- [ ] A) 50 km/h
- [ ] B) 25/18 km/h
- [ ] C) 18 km/h
- [ ] D) 1/12 km/h
- [ ] E) 5000 km/h

---

115 From a lighthouse, the bearing of a buoy is 025 degrees and the bearing of a rock is 095 degrees. What is the angle between the two directions, as seen from the lighthouse?

- [ ] A) 70 degrees
- [ ] B) 290 degrees
- [ ] C) 120 degrees
- [ ] D) 110 degrees
- [ ] E) 80 degrees

---

116 Alloy A has a density of 3 g/cm^3. Find the mass of 150 cm³ of alloy A.

- [ ] A) 45 g
- [ ] B) 450 g
- [ ] C) 50.00 g
- [ ] D) 153 g
- [ ] E) 4500 g

© Revision Library | revisionlibrary.co.uk

117 In a triangle, two of the interior angles are 66 degrees and 73 degrees. One side is extended to make an exterior angle at the third corner. What is the size of this exterior angle?

- ☐ A) 7 degrees
- ☐ B) 139 degrees
- ☐ C) 149 degrees
- ☐ D) 41 degrees
- ☐ E) 129 degrees

---

118 Convert 0.66 m to cm.

- ☐ A) 6600 cm
- ☐ B) 6.6 cm
- ☐ C) 66 cm
- ☐ D) 660 cm
- ☐ E) 0.66 cm

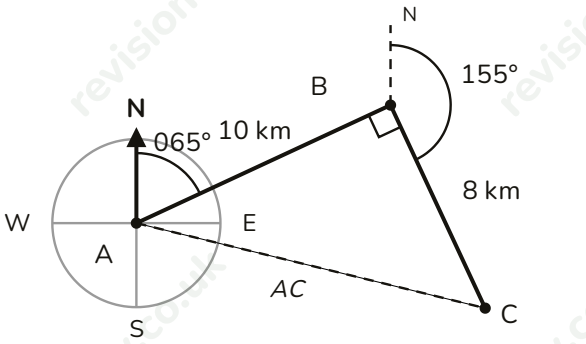
© Revision Library | revisionlibrary.co.uk

119 From a lighthouse, the bearing of a buoy is 045 degrees and the bearing of a rock is 200 degrees. What is the angle between the two directions, as seen from the lighthouse?

- ☐ A) 25 degrees
- ☐ B) 65 degrees
- ☐ C) 145 degrees
- ☐ D) 205 degrees
- ☐ E) 155 degrees

---

120 A ship sails from port A on a bearing of 065 degrees for 10 km to point B. It then changes course and sails on a bearing of 155 degrees for 8 km to point C.



(diagram not to scale)

(a) Show that angle ABC is a right angle. **(1)**

(b) Calculate the direct distance AC, correct to 3 significant figures. **(3)**

.....

© Revision Library | revisionlibrary.co.uk

Mark scheme · 2.5 Geometry and Measures: 2-hour Pack

Question 1

B cao (160); bearings are measured clockwise from north **B1**

Answer: B) 160

Question 2

E cao (9 g/cm^3); density = mass / volume **B1**

Answer: E) 9 g/cm^3

Question 3

D cao (95 degrees); exterior angle = sum of the two opposite interior angles **B1**

Answer: D) 95 degrees

Question 4

B cao (630 mm); multiply or divide by the conversion factor **B1**

Answer: B) 630 mm

Question 5

C cao (130 degrees); bearings are measured clockwise from north **B1**

Answer: C) 130 degrees

Question 6

A cao (7.8 g/cm^3); density = mass / volume **B1**

Answer: A) 7.8 g/cm^3

Question 7

D cao (22 degrees); angles in a triangle add to 180 degrees **B1**

Answer: D) 22 degrees

Question 8

E cao (7600 g); multiply or divide by the conversion factor **B1**

Answer: E) 7600 g

Question 9

C cao (150 degrees); bearings are measured clockwise from north **B1**

Answer: C) 150 degrees

Question 10

B cao (20 cm³); density = mass / volume **B1**

Answer: B) 20 cm^3

Question 11

A cao (14 degrees); angles in a triangle add to 180 degrees; the two base angles are equal **B1**

Answer: A) 14 degrees

Question 12

B cao (6500 m); multiply or divide by the conversion factor **B1**

Answer: B) 6500 m

Question 13

E cao (4 g/cm^3); density = mass / volume **B1**

Answer: E) 4 g/cm^3

Question 14

D cao (72 degrees); exterior angle = sum of the two opposite interior angles **B1**

Answer: D) 72 degrees

Question 15

A cao (186 minutes); multiply or divide by the conversion factor **B1**

Answer: A) 186 minutes

Question 16

D cao (155 degrees); bearings are measured clockwise from north **B1**

Answer: D) 155 degrees

Question 17

B cao (3 g/cm^3); density = mass / volume **B1**

Answer: B) 3 g/cm^3

Question 18

A cao (83 degrees); find x first, then the largest angle **B1**

Answer: A) 83 degrees

Question 19

E cao (850 mm); multiply or divide by the conversion factor **B1**

Answer: E) 850 mm

Question 20

C cao (100); bearings are measured clockwise from north **B1**

Answer: C) 100

Question 21

B cao (1.8 g/cm^3); density = mass / volume **B1**

Answer: B) 1.8 g/cm^3

Question 22

D cao (111 degrees); exterior angle = sum of the two opposite interior angles **B1**

Answer: D) 111 degrees

Question 23

C cao (126 minutes); multiply or divide by the conversion factor **B1**

Answer: C) 126 minutes

Question 24

E cao (015); bearings are measured clockwise from north **B1**

Answer: E) 015

Question 25

A cao (2 g/cm^3); density = mass / volume **B1**

Answer: A) 2 g/cm^3

Question 26

E cao (59 degrees); angles in a triangle add to 180 degrees; the two base angles are equal **B1**

Answer: E) 59 degrees

© Revision Library | revisionlibrary.co.uk

Question 27

B cao (6 km²); multiply or divide by the conversion factor **B1**

Answer: B) 6 km^2

Question 28

C cao (9.5 g/cm^3); density = mass / volume **B1**

Answer: C) 9.5 g/cm^3

Question 29

A cao (23 degrees); angles in a triangle add to 180 degrees; the two base angles are equal **B1**

Answer: A) 23 degrees

Question 30

B cao (390 g); multiply or divide by the conversion factor **B1**

Answer: B) 390 g

Question 31

A cao (350); bearings are measured clockwise from north **B1**

Answer: A) 350

Question 32

E cao (3.5 g/cm^3); density = mass / volume **B1**

Answer: E) 3.5 g/cm^3

Question 33

C cao (48 degrees); angles in a triangle add to 180 degrees **B1**

Answer: C) 48 degrees

Question 34

D cao (760 g); multiply or divide by the conversion factor **B1**

Answer: D) 760 g

Question 35

A cao (8 g/cm^3); density = mass / volume **B1**

Answer: A) 8 g/cm^3

Question 36

C cao (62 degrees); angles in a triangle add to 180 degrees **B1**

Answer: C) 62 degrees

Question 37

B cao (2300 g); multiply or divide by the conversion factor **B1**

Answer: B) 2300 g

Question 38

D cao (325); bearings are measured clockwise from north **B1**

Answer: D) 325

Question 39

B cao (20 cm³); density = mass / volume **B1**

Answer: B) 20 cm^3

Question 40

C cao (103 degrees); exterior angle = sum of the two opposite interior angles **B1**

Answer: C) 103 degrees

Question 41

A cao (40000 m); multiply or divide by the conversion factor **B1**

Answer: A) 40000 m

Question 42

(a) 0.5 x (8 + 14) x 6 oe seen **M1**

(a) 0.5 x 22 x 6 evaluated **M1**

(a) 66 m² cao **A1**

(a) Answer: 66 m^2

(b) 66 x 4.50 oe (ft from part a) **M1**

(b) £297 cao **A1**

(b) Answer: £297

Question 43

E cao (125 g); density = mass / volume **B1**

Answer: E) 125 g

Question 44

B cao (110 degrees); exterior angle = sum of the two opposite interior angles **B1**

Answer: B) 110 degrees

Question 45

A cao (4600 mm); multiply or divide by the conversion factor **B1**

Answer: A) 4600 mm

Question 46

E cao (335); bearings are measured clockwise from north **B1**

Answer: E) 335

Question 47

C cao (80 cm³); density = mass / volume **B1**

Answer: C) 80 cm^3

Question 48

D cao (52 degrees); angles in a triangle add to 180 degrees **B1**

Answer: D) 52 degrees

Question 49

C cao (4100 m); multiply or divide by the conversion factor **B1**

Answer: C) 4100 m

Question 50

A cao (255); bearings are measured clockwise from north **B1**

Answer: A) 255

Question 51

D cao (400 g); density = mass / volume **B1**

Answer: D) 400 g

Question 52

D cao (95 degrees); bearings are measured clockwise from north **B1**

Answer: D) 95 degrees

Question 53

B cao (9.5 g/cm^3); density = mass / volume **B1**

Answer: B) 9.5 g/cm^3

© Revision Library | revisionlibrary.co.uk

Question 54

A cao (87 degrees); find x first, then the largest angle **B1**

Answer: A) 87 degrees

Question 55

E cao (590 mm); multiply or divide by the conversion factor **B1**

Answer: E) 590 mm

Question 56

C cao (110); bearings are measured clockwise from north **B1**

Answer: C) 110

Question 57

D cao (38); sum the angles, set equal to 180, solve **B1**

Answer: D) 38

Question 58

B cao (4700000 m^2); multiply or divide by the conversion factor **B1**

Answer: B) 4700000 m^2

Question 59

E cao (195); bearings are measured clockwise from north **B1**

Answer: E) 195

Question 60

D cao (120 cm^3); density = mass / volume **B1**

Answer: D) 120 cm^3

Question 61

A cao (101 degrees); exterior angle = sum of the two opposite interior angles **B1**

Answer: A) 101 degrees

Question 62

B cao (150 g); multiply or divide by the conversion factor **B1**

Answer: B) 150 g

Question 63

C cao (85 degrees); bearings are measured clockwise from north **B1**

Answer: C) 85 degrees

Question 64

E cao (116 degrees); exterior angle = sum of the two opposite interior angles **B1**

Answer: E) 116 degrees

Question 65

D cao (910 g); multiply or divide by the conversion factor **B1**

Answer: D) 910 g

Question 66

C cao (120 degrees); bearings are measured clockwise from north **B1**

Answer: C) 120 degrees

Question 67

A cao (100 g); density = mass / volume **B1**

Answer: A) 100 g

Question 68

B cao (39 degrees); angles in a triangle add to 180 degrees; the two base angles are equal **B1**

Answer: B) 39 degrees

Question 69

D cao (55 mm); multiply or divide by the conversion factor **B1**

Answer: D) 55 mm

Question 70

B cao (030); bearings are measured clockwise from north **B1**

Answer: B) 030

Question 71

C cao (26); sum the angles, set equal to 180, solve **B1**

Answer: C) 26

Question 72

A cao (2100 mm^3); multiply or divide by the conversion factor **B1**

Answer: A) 2100 mm^3

Question 73

A cao (225); bearings are measured clockwise from north **B1**

Answer: A) 225

Question 74

B cao (210 g); density = mass / volume **B1**

Answer: B) 210 g

Question 75

D cao (103 degrees); exterior angle = sum of the two opposite interior angles **B1**

Answer: D) 103 degrees

Question 76

E cao (3 cm^2); multiply or divide by the conversion factor **B1**

Answer: E) 3 cm^2

Question 77

C cao (080); bearings are measured clockwise from north **B1**

Answer: C) 080

Question 78

B cao (525 g); density = mass / volume **B1**

Answer: B) 525 g

Question 79

E cao (98 degrees); exterior angle = sum of the two opposite interior angles **B1**

Answer: E) 98 degrees

Question 80

D cao (76 mm); multiply or divide by the conversion factor **B1**

Answer: D) 76 mm

Question 81

A cao (155); bearings are measured clockwise from north **B1**

Answer: A) 155

© Revision Library | revisionlibrary.co.uk

Question 82

C cao (195 g); density = mass / volume **B1**

Answer: C) 195 g

Question 83

D cao (136 degrees); exterior angle = sum of the two opposite interior angles **B1**

Answer: D) 136 degrees

Question 84

B cao (2100 g); multiply or divide by the conversion factor **B1**

Answer: B) 2100 g

Question 85

E cao (1560 g); density = mass / volume **B1**

Answer: E) 1560 g

Question 86

A cao (88 degrees); exterior angle = sum of the two opposite interior angles **B1**

Answer: A) 88 degrees

Question 87

C cao (4 km²); multiply or divide by the conversion factor **B1**

Answer: C) 4 km^2

Question 88

A cao (305); bearings are measured clockwise from north **B1**

Answer: A) 305

Question 89

B cao (120 g); density = mass / volume **B1**

Answer: B) 120 g

Question 90

E cao (100 degrees); exterior angle = sum of the two opposite interior angles **B1**

Answer: E) 100 degrees

Question 91

D cao (72 km/h); multiply or divide by the conversion factor **B1**

Answer: D) 72 km/h

Question 92

C cao (180); bearings are measured clockwise from north **B1**

Answer: C) 180

Question 93

C cao (90 g); density = mass / volume **B1**

Answer: C) 90 g

Question 94

D cao (50 degrees); angles in a triangle add to 180 degrees **B1**

Answer: D) 50 degrees

Question 95

E cao (5 km²); multiply or divide by the conversion factor **B1**

Answer: E) 5 km^2

Question 96

A cao (130); bearings are measured clockwise from north **B1**

Answer: A) 130

Question 97

B cao (1560 g); density = mass / volume **B1**

Answer: B) 1560 g

Question 98

A cao (106 degrees); angles in a triangle add to 180 degrees **B1**

Answer: A) 106 degrees

Question 99

B cao (105); bearings are measured clockwise from north **B1**

Answer: B) 105

Question 100

C cao (216 g); density = mass / volume **B1**

Answer: C) 216 g

Question 101

(a) Rectangle area = 10 x 6 = 60 seen **M1**

(a) Semicircle area = 0.5 x π x 5^2 oe seen **M1**

(a) 39.26... (or 39.3) evaluated for the semicircle **M1**

(a) 99.3 cm² awrt cao **A1**

(a) Answer: 99.3 cm^2

Question 102

D cao (106 degrees); exterior angle = sum of the two opposite interior angles **B1**

Answer: D) 106 degrees

Question 103

E cao (280 g); multiply or divide by the conversion factor **B1**

Answer: E) 280 g

Question 104

A cao (145); bearings are measured clockwise from north **B1**

Answer: A) 145

Question 105

B cao (40 g); density = mass / volume **B1**

Answer: B) 40 g

Question 106

C cao (68 degrees); exterior angle = sum of the two opposite interior angles **B1**

Answer: C) 68 degrees

Question 107

D cao (282 minutes); multiply or divide by the conversion factor **B1**

Answer: D) 282 minutes

Question 108

C cao (230); bearings are measured clockwise from north **B1**

Answer: C) 230

© Revision Library | revisionlibrary.co.uk

Question 109

D cao (9.5 g/cm^3); density = mass / volume **B1**

Answer: D) 9.5 g/cm^3

Question 110

A cao (60 degrees); angles in a triangle add to 180 degrees **B1**

Answer: A) 60 degrees

Question 111

B cao (2700 mm^3); multiply or divide by the conversion factor **B1**

Answer: B) 2700 mm^3

Question 112

E cao (245); bearings are measured clockwise from north **B1**

Answer: E) 245

Question 113

E cao (65 degrees); exterior angle = sum of the two opposite interior angles **B1**

Answer: E) 65 degrees

Question 114

C cao (18 km/h); multiply or divide by the conversion factor **B1**

Answer: C) 18 km/h

Question 115

A cao (70 degrees); bearings are measured clockwise from north **B1**

Answer: A) 70 degrees

Question 116

B cao (450 g); density = mass / volume **B1**

Answer: B) 450 g

Question 117

B cao (139 degrees); exterior angle = sum of the two opposite interior angles **B1**

Answer: B) 139 degrees

Question 118

C cao (66 cm); multiply or divide by the conversion factor **B1**

Answer: C) 66 cm

Question 119

E cao (155 degrees); bearings are measured clockwise from north **B1**

Answer: E) 155 degrees

Question 120

(a) cso: 155 - 65 = 90, so angle ABC = 90 degrees **B1**

(a) Answer: 90 degrees

(b) AC^2 = 10^2 + 8^2 oe seen (using angle ABC = 90 from part a) **M1**

(b) 100 + 64 = 164 seen **M1**

(b) 12.8 km awrt cao **A1**

(b) Answer: 12.8 km

© Revision Library | revisionlibrary.co.uk