2.93 Angles on Lines, at Points and in Triangles: 2-hour Pack

Total Marks

GL ASSESSMENT GL-11PLUS-MATHS · Calculators not allowed · about 120 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 An isosceles triangle has an angle of 52° between its two equal sides. What is the size of each of the other two angles?

- ☐ A) 128°
- ☐ B) 154°
- ☐ C) 52°
- ☐ D) 64°
- ☐ E) 65°

---

2 Angles around a point are 80° and 185° and x. What is the size of angle x?

- ☐ A) 105°
- ☐ B) 175°
- ☐ C) 265°
- ☐ D) 95°
- ☐ E) 85°

---

3 The angles on a straight line are x°, 2x°, 3x°. What is the size of the largest angle?

- ☐ A) 90°
- ☐ B) 91°
- ☐ C) 30°
- ☐ D) 60°
- ☐ E) 180°

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4 Three angles in a quadrilateral are 40°, 120° and 55°. What is the fourth angle?

- ☐ A) 215°
- ☐ B) 35°
- ☐ C) 145°
- ☐ D) 135°
- ☐ E) 155°

---

5 Angles on a straight line are 30° and 15° and x. What is the size of angle x?

- ☐ A) 315°
- ☐ B) 135°
- ☐ C) 145°
- ☐ D) 125°
- ☐ E) 45°

---

6 Two angles in a triangle are 60° and 50°. What is the third angle?

- ☐ A) 70°
- ☐ B) 250°
- ☐ C) 110°
- ☐ D) 30°
- ☐ E) 60°

---

7 The angles on a straight line are x°, 2x°. What is the size of the largest angle?

- ☐ A) 120°
- ☐ B) 119°
- ☐ C) 60°
- ☐ D) 121°
- ☐ E) 90°

---

8 Two angles in a triangle are 40° and 35°. What is the third angle?

- ☐ A) 285°
- ☐ B) 105°
- ☐ C) 75°
- ☐ D) 50°
- ☐ E) 95°

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9 Angles around a point are 10°, 30° and 275° and x. What is the size of angle x?

- ☐ A) 315°
- ☐ B) 55°
- ☐ C) 225°
- ☐ D) 35°
- ☐ E) 45°

---

10 The angles around a point are x°, 5x°. What is the value of x?

- ☐ A) 59
- ☐ B) 180
- ☐ C) 60
- ☐ D) 300
- ☐ E) 72

---

11 Two angles in a triangle are 30° and 60°. What is the third angle?

- ☐ A) 270°
- ☐ B) 90°
- ☐ C) 60°
- ☐ D) 80°
- ☐ E) 100°

---

12 Angles around a point are 195° and 145° and x. What is the size of angle x?

- ☐ A) 20°
- ☐ B) 250°
- ☐ C) 10°
- ☐ D) 340°
- ☐ E) 30°

---

13 The angles on a straight line are x°, x°, 2x°. What is the size of the smallest angle?

- ☐ A) 60°
- ☐ B) 90°
- ☐ C) 45°
- ☐ D) 135°
- ☐ E) 46°

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14 Three angles in a quadrilateral are 45°, 110° and 90°. What is the fourth angle?

- ☐ A) 245°
- ☐ B) 125°
- ☐ C) 205°
- ☐ D) 115°
- ☐ E) 65°

---

15 Two angles on a straight line are 105° and x. What is the size of angle x?

- ☐ A) 85°
- ☐ B) 255°
- ☐ C) 75°
- ☐ D) 105°
- ☐ E) 15°

---

16 An isosceles triangle has an angle of 28° between its two equal sides. What is the size of each of the other two angles?

- ☐ A) 28°
- ☐ B) 77°
- ☐ C) 14°
- ☐ D) 76°
- ☐ E) 152°

---

17 Angles around a point are 255°, 25° and 40° and x. What is the size of angle x?

- ☐ A) 230°
- ☐ B) 320°
- ☐ C) 50°
- ☐ D) 30°
- ☐ E) 40°

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18 Three angles in a quadrilateral are 135°, 120° and 70°. What is the fourth angle?

- [ ] A) 45°
- [ ] B) 35°
- [ ] C) 325°
- [ ] D) 145°
- [ ] E) 105°

---

19 Two angles in a triangle are 75° and 55°. What is the third angle?

- [ ] A) 15°
- [ ] B) 130°
- [ ] C) 50°
- [ ] D) 60°
- [ ] E) 230°

---

20 Angles around a point are 190°, 40° and 35° and x. What is the size of angle x?

- [ ] A) 95°
- [ ] B) 85°
- [ ] C) 105°
- [ ] D) 175°
- [ ] E) 265°

---

21 Three angles in a quadrilateral are 100°, 50° and 130°. What is the fourth angle?

- [ ] A) 100°
- [ ] B) 280°
- [ ] C) 210°
- [ ] D) 90°
- [ ] E) 80°

---

22 Two angles in a triangle are 85° and 35°. What is the third angle?

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

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23 Angles on a straight line are 125° and 40° and x. What is the size of angle x?

- [ ] A) 75°
- [ ] B) 195°
- [ ] C) 165°
- [ ] D) 15°
- [ ] E) 25°

---

24 The angles on a straight line are 2x°, 3x°, 4x°. What is the size of the smallest angle?

- [ ] A) 80°
- [ ] B) 39°
- [ ] C) 40°
- [ ] D) 20°
- [ ] E) 140°

---

25 Three angles in a quadrilateral are 135°, 110° and 50°. What is the fourth angle?

- [ ] A) 115°
- [ ] B) 65°
- [ ] C) 295°
- [ ] D) 55°
- [ ] E) 75°

---

26 An isosceles triangle has two equal base angles of 42° each. What is the third angle?

- [ ] A) 84°
- [ ] B) 138°
- [ ] C) 95°
- [ ] D) 42°
- [ ] E) 96°

---

27 Angles around a point are 10° and 105° and x. What is the size of angle x?

- [ ] A) 235°
- [ ] B) 115°
- [ ] C) 25°
- [ ] D) 245°
- [ ] E) 65°

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28 The angles on a straight line are x°, 4x°, 5x°. What is the size of the smallest angle?

- [ ] A) 18°
- [ ] B) 60°
- [ ] C) 162°
- [ ] D) 90°
- [ ] E) 36°

---

29 Three angles in a quadrilateral are 105°, 75° and 95°. What is the fourth angle?

- [ ] A) 75°
- [ ] B) 180°
- [ ] C) 275°
- [ ] D) 85°
- [ ] E) 95°

---

30 An isosceles triangle has an angle of 110° between its two equal sides. What is the size of each of the other two angles?

- [ ] A) 35°
- [ ] B) 70°
- [ ] C) 110°
- [ ] D) 36°
- [ ] E) 55°

---

31 The angles around a point are 2x°, 3x°, 4x°. What is the value of x?

- [ ] A) 320
- [ ] B) 120
- [ ] C) 90
- [ ] D) 40
- [ ] E) 39

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32 Three angles in a quadrilateral are 130°, 110° and 75°. What is the fourth angle?

- ☐ A) 55°
- ☐ B) 35°
- ☐ C) 45°
- ☐ D) 315°
- ☐ E) 135°

---

33 Three angles in a quadrilateral are 110°, 70° and 60°. What is the fourth angle?

- ☐ A) 110°
- ☐ B) 240°
- ☐ C) 130°
- ☐ D) 120°
- ☐ E) 60°

---

34 Angles on a straight line are 120° and 40° and x. What is the size of angle x?

- ☐ A) 20°
- ☐ B) 160°
- ☐ C) 200°
- ☐ D) 30°
- ☐ E) 10°

---

35 The angles on a straight line are x°, 3x°. What is the value of x?

- ☐ A) 135
- ☐ B) 45
- ☐ C) 60
- ☐ D) 44
- ☐ E) 90

---

36 Three angles in a quadrilateral are 130°, 120° and 60°. What is the fourth angle?

- ☐ A) 310°
- ☐ B) 60°
- ☐ C) 50°
- ☐ D) 110°
- ☐ E) 130°

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37 Angles on a straight line are 65° and 60° and x. What is the size of angle x?

- [ ] A) 65°
- [ ] B) 235°
- [ ] C) 125°
- [ ] D) 35°
- [ ] E) 55°

---

38 Three angles in a quadrilateral are 115°, 130° and 40°. What is the fourth angle?

- [ ] A) 85°
- [ ] B) 105°
- [ ] C) 285°
- [ ] D) 115°
- [ ] E) 75°

---

39 An isosceles triangle has two equal base angles of 36° each. What is the third angle?

- [ ] A) 72°
- [ ] B) 36°
- [ ] C) 144°
- [ ] D) 108°
- [ ] E) 107°

---

40 Angles around a point are 80°, 205° and 55° and x. What is the size of angle x?

- [ ] A) 20°
- [ ] B) 30°
- [ ] C) 250°
- [ ] D) 340°
- [ ] E) 10°

---

41 Three angles in a quadrilateral are 45°, 55° and 45°. What is the fourth angle?

- [ ] A) 35°
- [ ] B) 225°
- [ ] C) 215°
- [ ] D) 145°
- [ ] E) 260°

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42 Two angles in a triangle are 35° and 40°. What is the third angle?

- [ ] A) 105°
- [ ] B) 75°
- [ ] C) 55°
- [ ] D) 115°
- [ ] E) 285°

---

43 An isosceles triangle has two equal base angles of 26° each. What is the third angle?

- [ ] A) 77°
- [ ] B) 128°
- [ ] C) 154°
- [ ] D) 26°
- [ ] E) 52°

---

44 Three angles in a quadrilateral are 130°, 95° and 110°. What is the fourth angle?

- [ ] A) 135°
- [ ] B) 335°
- [ ] C) 35°
- [ ] D) 155°
- [ ] E) 25°

---

45 An isosceles triangle has two equal base angles of 70° each. What is the third angle?

- [ ] A) 41°
- [ ] B) 110°
- [ ] C) 40°
- [ ] D) 140°
- [ ] E) 39°

---

46 Two angles on a straight line are 70° and x. What is the size of angle x?

- [ ] A) 20°
- [ ] B) 110°
- [ ] C) 120°
- [ ] D) 290°
- [ ] E) 70°

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47 An isosceles triangle has an angle of 120° between its two equal sides. What is the size of each of the other two angles?

- [ ] A) 29°
- [ ] B) 30°
- [ ] C) 60°
- [ ] D) 120°
- [ ] E) 31°

---

48 Angles on a straight line are 25° and 25° and x. What is the size of angle x?

- [ ] A) 50°
- [ ] B) 140°
- [ ] C) 130°
- [ ] D) 310°
- [ ] E) 40°

---

49 Three angles in a quadrilateral are 120°, 80° and 90°. What is the fourth angle?

- [ ] A) 70°
- [ ] B) 110°
- [ ] C) 290°
- [ ] D) 60°
- [ ] E) 160°

---

50 Angles around a point are 145° and 25° and x. What is the size of angle x?

- [ ] A) 200°
- [ ] B) 10°
- [ ] C) 190°
- [ ] D) 180°
- [ ] E) 170°

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51 Angles around a point are 105°, 190° and 10° and x. What is the size of angle x?

- ☐ A) 215°
- ☐ B) 45°
- ☐ C) 305°
- ☐ D) 55°
- ☐ E) 65°

---

52 Three angles in a quadrilateral are 65°, 135° and 70°. What is the fourth angle?

- ☐ A) 90°
- ☐ B) 270°
- ☐ C) 160°
- ☐ D) 100°
- ☐ E) 80°

---

53 Two angles in a triangle are 50° and 85°. What is the third angle?

- ☐ A) 135°
- ☐ B) 225°
- ☐ C) 40°
- ☐ D) 45°
- ☐ E) 35°

---

54 Angles around a point are 100°, 40° and 115° and x. What is the size of angle x?

- ☐ A) 255°
- ☐ B) 115°
- ☐ C) 105°
- ☐ D) 95°
- ☐ E) 165°

---

55 Three angles in a quadrilateral are 135°, 70° and 105°. What is the fourth angle?

- ☐ A) 130°
- ☐ B) 50°
- ☐ C) 40°
- ☐ D) 155°
- ☐ E) 310°

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56 An isosceles triangle has two equal base angles of 46° each. What is the third angle?

- ☐ A) 92°
- ☐ B) 89°
- ☐ C) 46°
- ☐ D) 134°
- ☐ E) 88°

---

57 Three angles in a quadrilateral are 85°, 45° and 120°. What is the fourth angle?

- ☐ A) 250°
- ☐ B) 230°
- ☐ C) 70°
- ☐ D) 120°
- ☐ E) 110°

---

58 Two angles in a triangle are 20° and 75°. What is the third angle?

- ☐ A) 70°
- ☐ B) 75°
- ☐ C) 85°
- ☐ D) 265°
- ☐ E) 95°

---

59 Angles around a point are 10° and 185° and x. What is the size of angle x?

- ☐ A) 155°
- ☐ B) 165°
- ☐ C) 105°
- ☐ D) 175°
- ☐ E) 195°

---

60 Three angles in a quadrilateral are 85°, 130° and 95°. What is the fourth angle?

- ☐ A) 50°
- ☐ B) 130°
- ☐ C) 60°
- ☐ D) 40°
- ☐ E) 310°

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61 An isosceles triangle has an angle of 40° between its two equal sides. What is the size of each of the other two angles?

- [ ] A) 69°
- [ ] B) 40°
- [ ] C) 140°
- [ ] D) 70°
- [ ] E) 20°

---

62 Angles around a point are 70°, 155° and 35° and x. What is the size of angle x?

- [ ] A) 170°
- [ ] B) 260°
- [ ] C) 110°
- [ ] D) 90°
- [ ] E) 100°

---

63 An isosceles triangle has an angle of 118° between its two equal sides. What is the size of each of the other two angles?

- [ ] A) 31°
- [ ] B) 118°
- [ ] C) 28°
- [ ] D) 59°
- [ ] E) 62°

---

64 Angles around a point are 25°, 120° and 180° and x. What is the size of angle x?

- [ ] A) 25°
- [ ] B) 35°
- [ ] C) 325°
- [ ] D) 45°
- [ ] E) 235°

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65 Three angles in a quadrilateral are 90°, 115° and 125°. What is the fourth angle?

- [ ] A) 150°
- [ ] B) 40°
- [ ] C) 155°
- [ ] D) 30°
- [ ] E) 330°

---

66 Three angles in a quadrilateral are 65°, 135° and 130°. What is the fourth angle?

- [ ] A) 330°
- [ ] B) 160°
- [ ] C) 20°
- [ ] D) 30°
- [ ] E) 150°

---

67 In triangle ABC the angles at A and B are 50 degrees and 60 degrees. Work out the angle at C.

- [ ] A) 60
- [ ] B) 70
- [ ] C) 80
- [ ] D) 90
- [ ] E) 50

---

68 Two angles in a triangle are 40° and 45°. What is the third angle?

- [ ] A) 85°
- [ ] B) 105°
- [ ] C) 95°
- [ ] D) 50°
- [ ] E) 275°

---

69 Two angles on a straight line are 55° and x. What is the size of angle x?

- [ ] A) 135°
- [ ] B) 305°
- [ ] C) 115°
- [ ] D) 55°
- [ ] E) 125°

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70 Three angles in a quadrilateral are 95°, 135° and 50°. What is the fourth angle?

- ☐ A) 100°
- ☐ B) 80°
- ☐ C) 130°
- ☐ D) 280°
- ☐ E) 70°

---

71 An isosceles triangle has an angle of 42° between its two equal sides. What is the size of each of the other two angles?

- ☐ A) 42°
- ☐ B) 138°
- ☐ C) 69°
- ☐ D) 48°
- ☐ E) 70°

---

72 Angles around a point are 80°, 135° and 20° and x. What is the size of angle x?

- ☐ A) 115°
- ☐ B) 135°
- ☐ C) 145°
- ☐ D) 235°
- ☐ E) 125°

---

73 Three angles in a quadrilateral are 90°, 110° and 135°. What is the fourth angle?

- ☐ A) 335°
- ☐ B) 25°
- ☐ C) 160°
- ☐ D) 15°
- ☐ E) 155°

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74 Two angles in a triangle are 80° and 20°. What is the third angle?

- [ ] A) 80°
- [ ] B) 260°
- [ ] C) 100°
- [ ] D) 10°
- [ ] E) 70°

---

75 Two angles on a straight line are 95° and x. What is the size of angle x?

- [ ] A) 75°
- [ ] B) 95°
- [ ] C) 85°
- [ ] D) 265°
- [ ] E) 5°

---

76 Three angles in a quadrilateral are 60°, 65° and 40°. What is the fourth angle?

- [ ] A) 205°
- [ ] B) 165°
- [ ] C) 15°
- [ ] D) 185°
- [ ] E) 195°

---

77 An isosceles triangle has two equal base angles of 34° each. What is the third angle?

- [ ] A) 112°
- [ ] B) 146°
- [ ] C) 292°
- [ ] D) 113°
- [ ] E) 68°

---

78 Angles around a point are 270° and 65° and x. What is the size of angle x?

- [ ] A) 15°
- [ ] B) 245°
- [ ] C) 35°
- [ ] D) 25°
- [ ] E) 335°

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79 The angles on a straight line are x°, 4x°, 5x°. What is the value of x?

- [ ] A) 17
- [ ] B) 36
- [ ] C) 162
- [ ] D) 60
- [ ] E) 18

---

80 Three angles in a quadrilateral are 40°, 65° and 50°. What is the fourth angle?

- [ ] A) 205°
- [ ] B) 215°
- [ ] C) 25°
- [ ] D) 195°
- [ ] E) 155°

---

81 An isosceles triangle has an angle of 80° between its two equal sides. What is the size of each of the other two angles?

- [ ] A) 51°
- [ ] B) 49°
- [ ] C) 50°
- [ ] D) 100°
- [ ] E) 80°

---

82 Angles on a straight line are 120° and 35° and x. What is the size of angle x?

- [ ] A) 155°
- [ ] B) 35°
- [ ] C) 205°
- [ ] D) 25°
- [ ] E) 65°

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83 Three angles in a quadrilateral are 45°, 110° and 55°. What is the fourth angle?

- ☐ A) 30°
- ☐ B) 210°
- ☐ C) 150°
- ☐ D) 140°
- ☐ E) 160°

---

84 Two angles in a triangle are 55° and 50°. What is the third angle?

- ☐ A) 75°
- ☐ B) 35°
- ☐ C) 105°
- ☐ D) 255°
- ☐ E) 85°

---

85 Two angles on a straight line are 110° and x. What is the size of angle x?

- ☐ A) 250°
- ☐ B) 70°
- ☐ C) 110°
- ☐ D) 20°
- ☐ E) 80°

---

86 Three angles in a quadrilateral are 110°, 65° and 120°. What is the fourth angle?

- ☐ A) 295°
- ☐ B) 115°
- ☐ C) 55°
- ☐ D) 75°
- ☐ E) 65°

---

87 Two angles in a triangle are 25° and 20°. What is the third angle?

- ☐ A) 45°
- ☐ B) 315°
- ☐ C) 125°
- ☐ D) 65°
- ☐ E) 135°

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88 Angles around a point are 140°, 60° and 80° and x. What is the size of angle x?

- [ ] A) 190°
- [ ] B) 70°
- [ ] C) 80°
- [ ] D) 90°
- [ ] E) 280°

---

89 Three angles in a quadrilateral are 85°, 85° and 60°. What is the fourth angle?

- [ ] A) 50°
- [ ] B) 230°
- [ ] C) 120°
- [ ] D) 130°
- [ ] E) 190°

---

90 Two angles in a triangle are 80° and 65°. What is the third angle?

- [ ] A) 215°
- [ ] B) 35°
- [ ] C) 10°
- [ ] D) 25°
- [ ] E) 145°

---

91 Angles around a point are 65°, 95° and 50° and x. What is the size of angle x?

- [ ] A) 120°
- [ ] B) 150°
- [ ] C) 210°
- [ ] D) 160°
- [ ] E) 140°

---

92 The angles around a point are x°, 2x°, 3x°, 4x°. What is the value of x?

- [ ] A) 36
- [ ] B) 324
- [ ] C) 18
- [ ] D) 35
- [ ] E) 90

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93 Three angles in a quadrilateral are 50°, 120° and 55°. What is the fourth angle?

- [ ] A) 190°
- [ ] B) 45°
- [ ] C) 145°
- [ ] D) 225°
- [ ] E) 135°

---

94 Two angles in a triangle are 75° and 25°. What is the third angle?

- [ ] A) 15°
- [ ] B) 90°
- [ ] C) 80°
- [ ] D) 260°
- [ ] E) 100°

---

95 Angles around a point are 105°, 65° and 105° and x. What is the size of angle x?

- [ ] A) 185°
- [ ] B) 75°
- [ ] C) 95°
- [ ] D) 85°
- [ ] E) 275°

---

96 Three angles in a quadrilateral are 45°, 50° and 40°. What is the fourth angle?

- [ ] A) 215°
- [ ] B) 235°
- [ ] C) 225°
- [ ] D) 135°
- [ ] E) 45°

---

97 An isosceles triangle has two equal base angles of 68° each. What is the third angle?

- [ ] A) 112°
- [ ] B) 44°
- [ ] C) 224°
- [ ] D) 136°
- [ ] E) 45°

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98 Angles around a point are 140°, 50° and 100° and x. What is the size of angle x?

- ☐ A) 70°
- ☐ B) 200°
- ☐ C) 80°
- ☐ D) 290°
- ☐ E) 60°

---

99 Three angles in a quadrilateral are 95°, 70° and 55°. What is the fourth angle?

- ☐ A) 140°
- ☐ B) 220°
- ☐ C) 195°
- ☐ D) 130°
- ☐ E) 40°

---

100 An isosceles triangle has two equal base angles of 72° each. What is the third angle?

- ☐ A) 108°
- ☐ B) 144°
- ☐ C) 36°
- ☐ D) 37°
- ☐ E) 35°

---

101 Angles around a point are 25°, 175° and 80° and x. What is the size of angle x?

- ☐ A) 90°
- ☐ B) 70°
- ☐ C) 190°
- ☐ D) 80°
- ☐ E) 280°

---

102 Three angles in a quadrilateral are 55°, 120° and 100°. What is the fourth angle?

- ☐ A) 185°
- ☐ B) 85°
- ☐ C) 275°
- ☐ D) 75°
- ☐ E) 95°

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103 An isosceles triangle has two equal base angles of 50° each. What is the third angle?

- [ ] A) 80°
- [ ] B) 100°
- [ ] C) 79°
- [ ] D) 260°
- [ ] E) 130°

---

104 Two angles on a straight line are 85° and x. What is the size of angle x?

- [ ] A) 275°
- [ ] B) 85°
- [ ] C) 5°
- [ ] D) 95°
- [ ] E) 105°

---

105 The angles around a point are x°, 3x°. What is the size of the largest angle?

- [ ] A) 120°
- [ ] B) 270°
- [ ] C) 90°
- [ ] D) 180°
- [ ] E) 271°

---

106 Three angles in a quadrilateral are 55°, 95° and 90°. What is the fourth angle?

- [ ] A) 130°
- [ ] B) 110°
- [ ] C) 120°
- [ ] D) 240°
- [ ] E) 60°

---

107 An isosceles triangle has two equal base angles of 30° each. What is the third angle?

- [ ] A) 150°
- [ ] B) 60°
- [ ] C) 75°
- [ ] D) 119°
- [ ] E) 120°

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108 Two angles on a straight line are 25° and x. What is the size of angle x?

- [ ] A) 145°
- [ ] B) 335°
- [ ] C) 155°
- [ ] D) 65°
- [ ] E) 25°

---

109 The angles on a straight line are 2x°, 3x°. What is the size of the smallest angle?

- [ ] A) 60°
- [ ] B) 108°
- [ ] C) 36°
- [ ] D) 73°
- [ ] E) 72°

---

110 Three angles in a quadrilateral are 85°, 55° and 100°. What is the fourth angle?

- [ ] A) 110°
- [ ] B) 120°
- [ ] C) 240°
- [ ] D) 130°
- [ ] E) 60°

---

111 An isosceles triangle has two equal base angles of 60° each. What is the third angle?

- [ ] A) 61°
- [ ] B) 120°
- [ ] C) 240°
- [ ] D) 60°
- [ ] E) 59°

---

112 The angles around a point are x°, 5x°. What is the size of the smallest angle?

- [ ] A) 72°
- [ ] B) 180°
- [ ] C) 300°
- [ ] D) 30°
- [ ] E) 60°

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113 Three angles in a quadrilateral are 75°, 110° and 115°. What is the fourth angle?

- [ ] A) 50°
- [ ] B) 60°
- [ ] C) 70°
- [ ] D) 120°
- [ ] E) 300°

---

114 Two angles in a triangle are 45° and 65°. What is the third angle?

- [ ] A) 45°
- [ ] B) 60°
- [ ] C) 250°
- [ ] D) 70°
- [ ] E) 110°

---

115 The angles around a point are x°, x°, 2x°. What is the size of the smallest angle?

- [ ] A) 89°
- [ ] B) 91°
- [ ] C) 90°
- [ ] D) 180°
- [ ] E) 270°

---

116 Three angles in a quadrilateral are 105°, 90° and 70°. What is the fourth angle?

- [ ] A) 265°
- [ ] B) 85°
- [ ] C) 95°
- [ ] D) 165°
- [ ] E) 105°

---

117 Two angles in a triangle are 35° and 80°. What is the third angle?

- [ ] A) 55°
- [ ] B) 115°
- [ ] C) 245°
- [ ] D) 65°
- [ ] E) 75°

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118 The angles around a point are x°, 5x°. What is the size of the largest angle?

- [ ] A) 300°
- [ ] B) 60°
- [ ] C) 150°
- [ ] D) 72°
- [ ] E) 301°

---

119 Three angles in a quadrilateral are 100°, 40° and 75°. What is the fourth angle?

- [ ] A) 215°
- [ ] B) 155°
- [ ] C) 135°
- [ ] D) 35°
- [ ] E) 145°

---

120 An isosceles triangle has two equal base angles of 44° each. What is the third angle?

- [ ] A) 93°
- [ ] B) 92°
- [ ] C) 88°
- [ ] D) 136°
- [ ] E) 68°

---

121 The angles on a straight line are x°, 2x°, 3x°. What is the value of x?

- [ ] A) 30
- [ ] B) 60
- [ ] C) 29
- [ ] D) 90
- [ ] E) 150

---

122 Three angles in a quadrilateral are 135°, 100° and 80°. What is the fourth angle?

- [ ] A) 55°
- [ ] B) 135°
- [ ] C) 315°
- [ ] D) 45°
- [ ] E) 125°

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123 Two angles in a triangle are 85° and 45°. What is the third angle?

- ☐ A) 130°
- ☐ B) 230°
- ☐ C) 50°
- ☐ D) 5°
- ☐ E) 40°

---

124 Find angle P.

(2)

---

125 Three adjacent angles on a straight line are 2x, 3x and 4x.

(a) Find x. **(2)**

.....

(b) Find each angle. **(2)**

.....

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Mark scheme · 2.93 Angles on Lines, at Points and in Triangles: 2-hour Pack

A correct answer earns full marks unless the question asks for working, a method, proof or explanation.

Question 1

correct option D (64°) cao **B1**

Answer: D) 64°

Question 2

correct option D (95°) cao **B1**

Answer: D) 95°

Question 3

correct option A (90°) cao **B1**

Answer: A) 90°

Question 4

correct option C (145°) cao **B1**

Answer: C) 145°

Question 5

correct option B (135°) cao **B1**

Answer: B) 135°

Question 6

correct option A (70°) cao **B1**

Answer: A) 70°

Question 7

correct option A (120°) cao **B1**

Answer: A) 120°

Question 8

correct option B (105°) cao **B1**

Answer: B) 105°

Question 9

correct option E (45°) cao **B1**

Answer: E) 45°

Question 10

correct option C (60) cao **B1**

Answer: C) 60

Question 11

correct option B (90°) cao **B1**

Answer: B) 90°

Question 12

correct option A (20°) cao **B1**

Answer: A) 20°

Question 13

correct option C (45°) cao **B1**

Answer: C) 45°

Question 14

correct option D (115°) cao **B1**

Answer: D) 115°

Question 15

correct option C (75°) cao **B1**

Answer: C) 75°

Question 16

correct option D (76°) cao **B1**

Answer: D) 76°

Question 17

correct option E (40°) cao **B1**

Answer: E) 40°

Question 18

correct option B (35°) cao **B1**

Answer: B) 35°

Question 19

correct option C (50°) cao **B1**

Answer: C) 50°

Question 20

correct option A (95°) cao **B1**

Answer: A) 95°

Question 21

correct option E (80°) cao **B1**

Answer: E) 80°

Question 22

correct option C (60°) cao **B1**

Answer: C) 60°

Question 23

correct option D (15°) cao **B1**

Answer: D) 15°

Question 24

correct option C (40°) cao **B1**

Answer: C) 40°

Question 25

correct option B (65°) cao **B1**

Answer: B) 65°

Question 26

correct option E (96°) cao **B1**

Answer: E) 96°

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Question 27

correct option D (245°) cao **B1**

Answer: D) 245°

Question 28

correct option A (18°) cao **B1**

Answer: A) 18°

Question 29

correct option D (85°) cao **B1**

Answer: D) 85°

Question 30

correct option A (35°) cao **B1**

Answer: A) 35°

Question 31

correct option D (40) cao **B1**

Answer: D) 40

Question 32

correct option C (45°) cao **B1**

Answer: C) 45°

Question 33

correct option D (120°) cao **B1**

Answer: D) 120°

Question 34

correct option A (20°) cao **B1**

Answer: A) 20°

Question 35

correct option B (45) cao **B1**

Answer: B) 45

Question 36

correct option C (50°) cao **B1**

Answer: C) 50°

Question 37

correct option E (55°) cao **B1**

Answer: E) 55°

Question 38

correct option E (75°) cao **B1**

Answer: E) 75°

Question 39

correct option D (108°) cao **B1**

Answer: D) 108°

Question 40

correct option A (20°) cao **B1**

Answer: A) 20°

Question 41

correct option C (215°) cao **B1**

Answer: C) 215°

Question 42

correct option A (105°) cao **B1**

Answer: A) 105°

Question 43

correct option B (128°) cao **B1**

Answer: B) 128°

Question 44

correct option E (25°) cao **B1**

Answer: E) 25°

Question 45

correct option C (40°) cao **B1**

Answer: C) 40°

Question 46

correct option B (110°) cao **B1**

Answer: B) 110°

Question 47

correct option B (30°) cao **B1**

Answer: B) 30°

Question 48

correct option C (130°) cao **B1**

Answer: C) 130°

Question 49

correct option A (70°) cao **B1**

Answer: A) 70°

Question 50

correct option C (190°) cao **B1**

Answer: C) 190°

Question 51

correct option D (55°) cao **B1**

Answer: D) 55°

Question 52

correct option A (90°) cao **B1**

Answer: A) 90°

Question 53

correct option D (45°) cao **B1**

Answer: D) 45°

Question 54

correct option C (105°) cao **B1**

Answer: C) 105°

Question 55

correct option B (50°) cao **B1**

Answer: B) 50°

Question 56

correct option E (88°) cao **B1**

Answer: E) 88°

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Question 57

correct option E (110°) cao **B1**

Answer: E) 110°

Question 58

correct option C (85°) cao **B1**

Answer: C) 85°

Question 59

correct option B (165°) cao **B1**

Answer: B) 165°

Question 60

correct option A (50°) cao **B1**

Answer: A) 50°

Question 61

correct option D (70°) cao **B1**

Answer: D) 70°

Question 62

correct option E (100°) cao **B1**

Answer: E) 100°

Question 63

correct option A (31°) cao **B1**

Answer: A) 31°

Question 64

correct option B (35°) cao **B1**

Answer: B) 35°

Question 65

correct option D (30°) cao **B1**

Answer: D) 30°

Question 66

correct option D (30°) cao **B1**

Answer: D) 30°

Question 67

correct option B (70) cao **B1**

Answer: B) 70 degrees (180 - 50 - 60 = 70).

Question 68

correct option C (95°) cao **B1**

Answer: C) 95°

Question 69

correct option E (125°) cao **B1**

Answer: E) 125°

Question 70

correct option B (80°) cao **B1**

Answer: B) 80°

Question 71

correct option C (69°) cao **B1**

Answer: C) 69°

Question 72

correct option E (125°) cao **B1**

Answer: E) 125°

Question 73

correct option B (25°) cao **B1**

Answer: B) 25°

Question 74

correct option A (80°) cao **B1**

Answer: A) 80°

Question 75

correct option C (85°) cao **B1**

Answer: C) 85°

Question 76

correct option E (195°) cao **B1**

Answer: E) 195°

Question 77

correct option A (112°) cao **B1**

Answer: A) 112°

Question 78

correct option D (25°) cao **B1**

Answer: D) 25°

Question 79

correct option E (18) cao **B1**

Answer: E) 18

Question 80

correct option A (205°) cao **B1**

Answer: A) 205°

Question 81

correct option C (50°) cao **B1**

Answer: C) 50°

Question 82

correct option D (25°) cao **B1**

Answer: D) 25°

Question 83

correct option C (150°) cao **B1**

Answer: C) 150°

Question 84

correct option A (75°) cao **B1**

Answer: A) 75°

Question 85

correct option B (70°) cao **B1**

Answer: B) 70°

Question 86

correct option E (65°) cao **B1**

Answer: E) 65°

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Question 87

correct option E (135°) cao **B1**

Answer: E) 135°

Question 88

correct option C (80°) cao **B1**

Answer: C) 80°

Question 89

correct option D (130°) cao **B1**

Answer: D) 130°

Question 90

correct option B (35°) cao **B1**

Answer: B) 35°

Question 91

correct option B (150°) cao **B1**

Answer: B) 150°

Question 92

correct option A (36) cao **B1**

Answer: A) 36

Question 93

correct option E (135°) cao **B1**

Answer: E) 135°

Question 94

correct option C (80°) cao **B1**

Answer: C) 80°

Question 95

correct option D (85°) cao **B1**

Answer: D) 85°

Question 96

correct option C (225°) cao **B1**

Answer: C) 225°

Question 97

correct option B (44°) cao **B1**

Answer: B) 44°

Question 98

correct option A (70°) cao **B1**

Answer: A) 70°

Question 99

correct option A (140°) cao **B1**

Answer: A) 140°

Question 100

correct option C (36°) cao **B1**

Answer: C) 36°

Question 101

correct option D (80°) cao **B1**

Answer: D) 80°

Question 102

correct option B (85°) cao **B1**

Answer: B) 85°

Question 103

correct option A (80°) cao **B1**

Answer: A) 80°

Question 104

correct option D (95°) cao **B1**

Answer: D) 95°

Question 105

correct option B (270°) cao **B1**

Answer: B) 270°

Question 106

correct option C (120°) cao **B1**

Answer: C) 120°

Question 107

correct option E (120°) cao **B1**

Answer: E) 120°

Question 108

correct option C (155°) cao **B1**

Answer: C) 155°

Question 109

correct option E (72°) cao **B1**

Answer: E) 72°

Question 110

correct option B (120°) cao **B1**

Answer: B) 120°

Question 111

correct option D (60°) cao **B1**

Answer: D) 60°

Question 112

correct option E (60°) cao **B1**

Answer: E) 60°

Question 113

correct option B (60°) cao **B1**

Answer: B) 60°

Question 114

correct option D (70°) cao **B1**

Answer: D) 70°

Question 115

correct option C (90°) cao **B1**

Answer: C) 90°

Question 116

correct option C (95°) cao **B1**

Answer: C) 95°

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Question 117

correct option D (65°) cao **B1**

Answer: D) 65°

Question 118

correct option A (300°) cao **B1**

Answer: A) 300°

Question 119

correct option E (145°) cao **B1**

Answer: E) 145°

Question 120

correct option B (92°) cao **B1**

Answer: B) 92°

Question 121

correct option A (30) cao **B1**

Answer: A) 30

Question 122

correct option D (45°) cao **B1**

Answer: D) 45°

Question 123

correct option C (50°) cao **B1**

Answer: C) 50°

Question 124

state that base angles at Q and R are equal (or identify two angles are 48) or set up 48 + 48 + P = 180 **M1**

P = 84 degrees cao **A1**

Answer: 84 degrees (180 - 48 - 48 = 84).

Question 125

(a) form equation 2x + 3x + 4x = 180 or 9x = 180 **M1**

(a) x = 20 cao **A1**

(a) Answer: x = 20

(b) substitute x = 20 into 2x, 3x, 4x seen or equivalent **M1**

(b) angles 40, 60 and 80 degrees cao **A1**

(b) Answer: 2x = 40, 3x = 60, 4x = 80

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