SSC GD Constable Exam: Mensuration MCQ Set

Instructions:
- This practice set contains 100 multiple-choice questions (MCQs) on Mensuration, covering 2D and 3D shapes.
- Each question carries 2 marks. There is a negative marking of 0.50 marks for each incorrect answer, as per the latest SSC GD exam pattern.
- Questions are based on the SSC GD syllabus for Quantitative Aptitude, focusing on Mensuration calculations at a 10th-grade level.
- Answers are provided with concise explanations for clarity.

Section 1: 2D Mensuration (Questions 1–50)

1. What is the area of a rectangle with length 12 cm and breadth 8 cm?
   A) 96 cm²
   B) 88 cm²
   C) 100 cm²
   D) 104 cm²
   Answer: A
   Explanation: Area of a rectangle = length × breadth = 12 × 8 = 96 cm².

2. The perimeter of a square is 48 cm. What is its area?
   A) 121 cm²
   B) 144 cm²
   C) 169 cm²
   D) 196 cm²
   Answer: B
   Explanation: Perimeter = 4 × side, so side = 48 / 4 = 12 cm. Area = side² = 12² = 144 cm².

3. A triangle has a base of 10 cm and height of 6 cm. What is its area?
   A) 30 cm²
   B) 36 cm²
   C) 40 cm²

D) 48 cm²

Answer: A

Explanation: Area of a triangle = (1/2) × base × height = (1/2) × 10 × 6 = 30 cm².

4. The circumference of a circle is 44 cm. What is its area? (Use π = 22/7)

   A) 144 cm²
   B) 154 cm²
   C) 164 cm²
   D) 174 cm²

   Answer: B

   Explanation: Circumference = 2πr = 44, so r = 44 / (2 × 22/7) = 7 cm. Area = πr² = (22/7) × 7² = 154 cm².

5. A rectangle has an area of 72 cm² and length of 9 cm. What is its breadth?

   A) 6 cm
   B) 8 cm
   C) 10 cm
   D) 12 cm

   Answer: B

   Explanation: Area = length × breadth, so 72 = 9 × breadth, breadth = 72 / 9 = 8 cm.

6. The side of a square is 15 cm. What is its perimeter?

   A) 45 cm
   B) 60 cm
   C) 75 cm
   D) 90 cm

   Answer: B

   Explanation: Perimeter of a square = 4 × side = 4 × 15 = 60 cm.

7. A triangle's area is 24 cm², and its base is 8 cm. What is its height?

   A) 4 cm
   B) 5 cm

C) 6 cm

D) 7 cm

Answer: C

Explanation: Area = (1/2) × base × height, so 24 = (1/2) × 8 × height, height = (24 × 2) / 8 = 6 cm.

8. The diameter of a circle is 14 cm. What is its circumference? (Use π = 22/7)

A) 40 cm

B) 44 cm

C) 48 cm

D) 52 cm

Answer: B

Explanation: Radius = 14 / 2 = 7 cm. Circumference = 2πr = 2 × (22/7) × 7 = 44 cm.

9. A rectangular garden has a length of 20 m and breadth of 15 m. What is its perimeter?

A) 60 m

B) 70 m

C) 80 m

D) 90 m

Answer: B

Explanation: Perimeter of a rectangle = 2(length + breadth) = 2(20 + 15) = 70 m.

10. The area of a square is 81 cm². What is its side length?

A) 7 cm

B) 8 cm

C) 9 cm

D) 10 cm

Answer: C

Explanation: Area = side², so side = √81 = 9 cm.

11. A triangle has an area of 45 cm² and height of 9 cm. What is its base?

A) 8 cm
B) 9 cm
C) 10 cm
D) 11 cm
Answer: C
Explanation: Area = (1/2) × base × height, so 45 = (1/2) × base × 9, base = (45 × 2) / 9 = 10 cm.

12. The radius of a circle is 7 cm. What is its area? (Use π = 22/7)
A) 144 cm²
B) 154 cm²
C) 164 cm²
D) 174 cm²
Answer: B
Explanation: Area = πr² = (22/7) × 7² = 154 cm².

13. A rectangle's perimeter is 50 cm, and its length is 15 cm. What is its breadth?
A) 8 cm
B) 10 cm
C) 12 cm
D) 14 cm
Answer: B
Explanation: Perimeter = 2(length + breadth), so 50 = 2(15 + breadth), breadth = (50 / 2) - 15 = 10 cm.

14. The side of a square is 20 cm. What is its area?
A) 360 cm²
B) 400 cm²
C) 440 cm²
D) 480 cm²
Answer: B
Explanation: Area = side² = 20² = 400 cm².

15. A triangle's base is 12 cm, and its area is 36 cm². What is its height?

A) 4 cm

B) 5 cm

C) 6 cm

D) 7 cm

Answer: C

Explanation: Area = (1/2) × base × height, so 36 = (1/2) × 12 × height, height = (36 × 2) / 12 = 6 cm.

16. The circumference of a circle is 88 cm. What is its radius? (Use π = 22/7)

A) 12 cm

B) 14 cm

C) 16 cm

D) 18 cm

Answer: B

Explanation: Circumference = 2πr = 88, so r = 88 / (2 × 22/7) = 14 cm.

17. A rectangle has an area of 120 cm² and breadth of 8 cm. What is its length?

A) 12 cm

B) 14 cm

C) 15 cm

D) 16 cm

Answer: C

Explanation: Area = length × breadth, so 120 = length × 8, length = 120 / 8 = 15 cm.

18. The perimeter of a square is 64 cm. What is its side length?

A) 14 cm

B) 16 cm

C) 18 cm

D) 20 cm

Answer: B

Explanation: Perimeter = 4 × side, so side = 64 / 4 = 16 cm.

19. A triangle has an area of 60 cm² and base of 15 cm. What is its height?
    A) 6 cm
    B) 7 cm
    C) 8 cm
    D) 9 cm
    Answer: C
    Explanation: Area = (1/2) × base × height, so 60 = (1/2) × 15 × height, height = (60 × 2) / 15 = 8 cm.

20. The diameter of a circle is 28 cm. What is its area? (Use π = 22/7)
    A) 616 cm²
    B) 628 cm²
    C) 640 cm²
    D) 652 cm²
    Answer: A
    Explanation: Radius = 28 / 2 = 14 cm. Area = πr² = (22/7) × 14² = 616 cm².

21. A rectangle's length is 25 m, and its perimeter is 70 m. What is its breadth?
    A) 10 m
    B) 12 m
    C) 14 m
    D) 16 m
    Answer: A
    Explanation: Perimeter = 2(length + breadth), so 70 = 2(25 + breadth), breadth = (70 / 2) - 25 = 10 m.

22. The area of a square is 100 cm². What is its perimeter?
    A) 36 cm
    B) 40 cm
    C) 44 cm
    D) 48 cm
    Answer: B

Explanation: Area = side², so side = √100 = 10 cm. Perimeter = 4 × side = 4 × 10 = 40 cm.

23. A triangle's height is 10 cm, and its area is 50 cm². What is its base?
   A) 8 cm
   B) 10 cm
   C) 12 cm
   D) 14 cm
   Answer: B
   Explanation: Area = (1/2) × base × height, so 50 = (1/2) × base × 10, base = (50 × 2) / 10 = 10 cm.

24. The radius of a circle is 21 cm. What is its circumference? (Use π = 22/7)
   A) 126 cm
   B) 132 cm
   C) 138 cm
   D) 144 cm
   Answer: B
   Explanation: Circumference = 2πr = 2 × (22/7) × 21 = 132 cm.

25. A rectangle has an area of 150 cm² and length of 15 cm. What is its breadth?
   A) 8 cm
   B) 10 cm
   C) 12 cm
   D) 14 cm
   Answer: B
   Explanation: Area = length × breadth, so 150 = 15 × breadth, breadth = 150 / 15 = 10 cm.

26. The side of a square is 18 cm. What is its perimeter?
   A) 64 cm
   B) 68 cm
   C) 72 cm

D) 76 cm
Answer: C
Explanation: Perimeter = 4 × side = 4 × 18 = 72 cm.

27. A triangle has an area of 72 cm² and base of 12 cm. What is its height?
    A) 10 cm
    B) 11 cm
    C) 12 cm
    D) 13 cm
    Answer: C
    Explanation: Area = (1/2) × base × height, so 72 = (1/2) × 12 × height, height = (72 × 2) / 12 = 12 cm.

28. The circumference of a circle is 66 cm. What is its area? (Use π = 22/7)
    A) 346.5 cm²
    B) 356.5 cm²
    C) 366.5 cm²
    D) 376.5 cm²
    Answer: A
    Explanation: Circumference = 2πr = 66, so r = 66 / (2 × 22/7) = 10.5 cm. Area = πr² = (22/7) × (10.5)² = 346.5 cm².

29. A rectangle's perimeter is 60 cm, and its breadth is 12 cm. What is its length?
    A) 16 cm
    B) 18 cm
    C) 20 cm
    D) 22 cm
    Answer: B
    Explanation: Perimeter = 2(length + breadth), so 60 = 2(length + 12), length = (60 / 2) - 12 = 18 cm.

30. The area of a square is 169 cm². What is its side length?
    A) 11 cm
    B) 12 cm

C) 13 cm
D) 14 cm
Answer: C
Explanation: Area = side², so side = √169 = 13 cm.

31. A triangle has an area of 90 cm² and height of 12 cm. What is its base?
   A) 12 cm
   B) 14 cm
   C) 15 cm
   D) 16 cm
   Answer: C
   Explanation: Area = (1/2) × base × height, so 90 = (1/2) × base × 12,
base = (90 × 2) / 12 = 15 cm.

32. The radius of a circle is 14 cm. What is its area? (Use π = 22/7)
   A) 652 cm²
   B) 628 cm²
   C) 640 cm²
   D) 616 cm²
   Answer: D
   Explanation: Area = πr² = (22/7) × 14² = 616 cm².

33. A rectangle's length is 30 m, and its perimeter is 80 m. What is its
breadth?
   A) 10 m
   B) 12 m
   C) 14 m
   D) 16 m
   Answer: A
   Explanation: Perimeter = 2(length + breadth), so 80 = 2(30 + breadth),
breadth = (80 / 2) - 30 = 10 m.

34. The perimeter of a square is 56 cm. What is its area?
   A) 144 cm²
   B) 169 cm²

C) 196 cm²
D) 225 cm²
Answer: C
Explanation: Perimeter = 4 × side, so side = 56 / 4 = 14 cm. Area = side² = 14² = 196 cm².

35. A triangle's base is 16 cm, and its area is 48 cm². What is its height?
    A) 5 cm
    B) 6 cm
    C) 7 cm
    D) 8 cm
    Answer: B
    Explanation: Area = (1/2) × base × height, so 48 = (1/2) × 16 × height, height = (48 × 2) / 16 = 6 cm.

36. The diameter of a circle is 42 cm. What is its circumference? (Use π = 22/7)
    A) 126 cm
    B) 132 cm
    C) 138 cm
    D) 144 cm
    Answer: B
    Explanation: Radius = 42 / 2 = 21 cm. Circumference = 2πr = 2 × (22/7) × 21 = 132 cm.

37. A rectangle has an area of 200 cm² and breadth of 10 cm. What is its length?
    A) 18 cm
    B) 24 cm
    C) 22 cm
    D) 20 cm
    Answer: D
    Explanation: Area = length × breadth, so 200 = length × 10, length = 200 / 10 = 20 cm.

38. The side of a square is 25 cm. What is its perimeter?
    A) 90 cm
    B) 95 cm
    C) 100 cm
    D) 105 cm
    Answer: C
    Explanation: Perimeter = 4 × side = 4 × 25 = 100 cm.

39. A triangle has an area of 120 cm² and base of 20 cm. What is its height?
    A) 10 cm
    B) 11 cm
    C) 12 cm
    D) 13 cm
    Answer: C
    Explanation: Area = (1/2) × base × height, so 120 = (1/2) × 20 × height, height = (120 × 2) / 20 = 12 cm.

40. The circumference of a circle is 110 cm. What is its radius? (Use π = 22/7)
    A) 15 cm
    B) 16 cm
    C) 17.5 cm
    D) 18.5 cm
    Answer: C
    Explanation: Circumference = 2πr = 110, so r = 110 / (2 × 22/7) = 17.5 cm.

41. A rectangle's perimeter is 72 cm, and its length is 20 cm. What is its breadth?
    A) 14 cm
    B) 15 cm
    C) 16 cm
    D) 17 cm
    Answer: C

Explanation: Perimeter = 2(length + breadth), so 72 = 2(20 + breadth), breadth = (72 / 2) - 20 = 16 cm.

42. The area of a square is 64 cm². What is its side length?
    A) 6 cm
    B) 7 cm
    C) 8 cm
    D) 9 cm
    Answer: C
    Explanation: Area = side², so side = √64 = 8 cm.

43. A triangle has an area of 84 cm² and height of 14 cm. What is its base?
    A) 10 cm
    B) 11 cm
    C) 12 cm
    D) 13 cm
    Answer: C
    Explanation: Area = (1/2) × base × height, so 84 = (1/2) × base × 14, base = (84 × 2) / 14 = 12 cm.

44. The radius of a circle is 10 cm. What is its circumference? (Use π = 3.14)
    A) 60 cm
    B) 62.8 cm
    C) 64 cm
    D) 66 cm
    Answer: B
    Explanation: Circumference = 2πr = 2 × 3.14 × 10 = 62.8 cm.

45. A rectangle has an area of 180 cm² and length of 12 cm. What is its breadth?
    A) 12 cm
    B) 13 cm
    C) 14 cm
    D) 15 cm

Answer: D

Explanation: Area = length × breadth, so 180 = 12 × breadth, breadth = 180 / 12 = 15 cm.

46. The perimeter of a square is 80 cm. What is its area?
    A) 360 cm²
    B) 400 cm²
    C) 440 cm²
    D) 480 cm²
    Answer: B

Explanation: Perimeter = 4 × side, so side = 80 / 4 = 20 cm. Area = side² = 20² = 400 cm².

47. A triangle's base is 18 cm, and its area is 54 cm². What is its height?
    A) 5 cm
    B) 6 cm
    C) 7 cm
    D) 8 cm
    Answer: B

Explanation: Area = (1/2) × base × height, so 54 = (1/2) × 18 × height, height = (54 × 2) / 18 = 6 cm.

48. The diameter of a circle is 20 cm. What is its area? (Use π = 3.14)
    A) 300 cm²
    B) 314 cm²
    C) 320 cm²
    D) 330 cm²
    Answer: B

Explanation: Radius = 20 / 2 = 10 cm. Area = πr² = 3.14 × 10² = 314 cm².

49. A rectangle's length is 24 m, and its perimeter is 68 m. What is its breadth?
    A) 10 m
    B) 11 m
    C) 12 m

D) 13 m
Answer: A
Explanation: Perimeter = 2(length + breadth), so 68 = 2(24 + breadth), breadth = (68 / 2) - 24 = 10 m.

50. The area of a square is 144 cm². What is its perimeter?
    A) 40 cm
    B) 44 cm
    C) 48 cm
    D) 52 cm
    Answer: C
    Explanation: Area = side², so side = √144 = 12 cm. Perimeter = 4 × side = 4 × 12 = 48 cm.

Section 2: 3D Mensuration (Questions 51–100)

51. The volume of a cuboid is 600 cm³, with length 10 cm and breadth 5 cm. What is its height?
    A) 10 cm
    B) 12 cm
    C) 14 cm
    D) 16 cm
    Answer: B
    Explanation: Volume = length × breadth × height, so 600 = 10 × 5 × height, height = 600 / (10 × 5) = 12 cm.

52. A cube has a side length of 6 cm. What is its volume?
    A) 200 cm³
    B) 216 cm³
    C) 224 cm³
    D) 232 cm³
    Answer: B
    Explanation: Volume of a cube = side³ = 6³ = 216 cm³.

53. The radius of a cylinder is 7 cm, and its height is 10 cm. What is its volume? (Use π = 22/7)

    A) 1540 cm³
    B) 1560 cm³
    C) 1580 cm³
    D) 1600 cm³
    Answer: A
    Explanation: Volume = $\pi r^2 h$ = (22/7) × 7² × 10 = 1540 cm³.

54. A cone has a radius of 3 cm and height of 4 cm. What is its volume? (Use π = 3.14)

    A) 36 cm³
    B) 37.68 cm³
    C) 38 cm³
    D) 39 cm³
    Answer: B
    Explanation: Volume = $(1/3)\pi r^2 h$ = (1/3) × 3.14 × 3² × 4 = 37.68 cm³.

55. The radius of a sphere is 7 cm. What is its surface area? (Use π = 22/7)

    A) 606 cm²
    B) 616 cm²
    C) 626 cm²
    D) 636 cm²
    Answer: B
    Explanation: Surface area = $4\pi r^2$ = 4 × (22/7) × 7² = 616 cm².

56. A cuboid has dimensions 12 cm, 8 cm, and 6 cm. What is its surface area?

    A) 312 cm²
    B) 324 cm²
    C) 336 cm²
    D) 348 cm²
    Answer: C

Explanation: Surface area = 2(lb + bh + hl) = 2(12 × 8 + 8 × 6 + 6 × 12) = 2(96 + 48 + 72) = 336 cm².

57. A cube's volume is 125 cm³. What is its side length?
   A) 4 cm
   B) 5 cm
   C) 6 cm
   D) 7 cm
   Answer: B
   Explanation: Volume = side³, so side = $\sqrt[3]{125}$ = 5 cm.

58. The radius of a cylinder is 5 cm, and its height is 12 cm. What is its curved surface area? (Use π = 3.14)
   A) 360 cm²
   B) 376.8 cm²
   C) 384 cm²
   D) 390 cm²
   Answer: B
   Explanation: Curved surface area = 2πrh = 2 × 3.14 × 5 × 12 = 376.8 cm².

59. A cone has a radius of 6 cm and height of 8 cm. What is its slant height?
   A) 10 cm
   B) 11 cm
   C) 12 cm
   D) 13 cm
   Answer: A
   Explanation: Slant height = $\sqrt{(r^2 + h^2)}$ = $\sqrt{(6^2 + 8^2)}$ = $\sqrt{(36 + 64)}$ = 10 cm.

60. The radius of a sphere is 14 cm. What is its volume? (Use π = 22/7)
   A) 11132 cm³
   B) 11232 cm³
   C) 11332 cm³
   D) 11432 cm³

Answer: C

Explanation: Volume = $(4/3)\pi r^3$ = (4/3) × (22/7) × 14^3 = 11332 cm³.

61. A cuboid's volume is 720 cm³, with length 15 cm and height 6 cm. What is its breadth?

    A) 6 cm

    B) 8 cm

    C) 10 cm

    D) 12 cm

    Answer: B

    Explanation: Volume = length × breadth × height, so 720 = 15 × breadth × 6, breadth = 720 / (15 × 6) = 8 cm.

62. A cube has a surface area of 150 cm². What is its side length?

    A) 4 cm

    B) 5 cm

    C) 6 cm

    D) 7 cm

    Answer: B

    Explanation: Surface area = 6 × side², so 150 = 6 × side², side² = 150 / 6 = 25, side = 5 cm.

63. The radius of a cylinder is 7 cm, and its volume is 1232 cm³. What is its height? (Use π = 22/7)

    A) 8 cm

    B) 9 cm

    C) 10 cm

    D) 11 cm

    Answer: A

    Explanation: Volume = $\pi r^2 h$, so 1232 = (22/7) × 7² × h, h = 1232 / (22/7 × 49) = 8 cm.

64. A cone's volume is 100.48 cm³, and its radius is 4 cm. What is its height? (Use π = 3.14)

    A) 5 cm

B) 6 cm

C) 7 cm

D) 8 cm

Answer: B

Explanation: Volume = $(1/3)\pi r^2 h$, so $100.48 = (1/3) \times 3.14 \times 4^2 \times h$, h = $(100.48 \times 3) / (3.14 \times 16) = 6$ cm.

65. The radius of a sphere is 21 cm. What is its surface area? (Use π = 22/7)

A) 5444 cm²

B) 5544 cm²

C) 5644 cm²

D) 5744 cm²

Answer: B

Explanation: Surface area = $4\pi r^2 = 4 \times (22/7) \times 21^2 = 5544$ cm².

66. A cuboid has dimensions 10 cm, 6 cm, and 5 cm. What is its volume?

A) 280 cm³

B) 300 cm³

C) 320 cm³

D) 340 cm³

Answer: B

Explanation: Volume = length × breadth × height = 10 × 6 × 5 = 300 cm³.

67. A cube's volume is 343 cm³. What is its surface area?

A) 252 cm²

B) 264 cm²

C) 276 cm²

D) 288 cm²

Answer: A

Explanation: Volume = side³, so side = $\sqrt[3]{343}$ = 7 cm. Surface area = 6 × side² = 6 × 7² = 252 cm².

68. The radius of a cylinder is 10 cm, and its height is 14 cm. What is its total surface area? (Use π = 3.14)

A) 1758.4 cm²
B) 1768.4 cm²
C) 1778.4 cm²
D) 1788.4 cm²
Answer: B
Explanation: Total surface area = 2πr(r + h) = 2 × 3.14 × 10 × (10 + 14) = 1768.4 cm².

69. A cone has a radius of 5 cm and slant height of 13 cm. What is its total surface area? (Use π = 3.14)
    A) 282.6 cm²
    B) 292.6 cm²
    C) 302.6 cm²
    D) 312.6 cm²
    Answer: A
    Explanation: Total surface area = πr(r + l) = 3.14 × 5 × (5 + 13) = 282.6 cm².

70. The radius of a sphere is 7 cm. What is its volume? (Use π = 22/7)
    A) 1436 cm³
    B) 1446 cm³
    C) 1456 cm³
    D) 1466 cm³
    Answer: A
    Explanation: Volume = (4/3)πr³ = (4/3) × (22/7) × 7³ = 1436 cm³.

71. A cuboid's surface area is 214 cm², with length 7 cm and breadth 5 cm. What is its height?
    A) 4 cm
    B) 5 cm
    C) 6 cm
    D) 7 cm
    Answer: C
    Explanation: Surface area = 2(lb + bh + hl), so 214 = 2(7 × 5 + 5 × h + h × 7), 107 = 35 + 12h, h = (107 - 35) / 12 = 6 cm.

72. A cube has a side length of 8 cm. What is its surface area?

    A) 364 cm²

    B) 384 cm²

    C) 404 cm²

    D) 424 cm²

    Answer: B

    Explanation: Surface area = 6 × side² = 6 × 8² = 384 cm².

73. The radius of a cylinder is 4 cm, and its volume is 301.44 cm³. What is its height? (Use π = 3.14)

    A) 5 cm

    B) 6 cm

    C) 7 cm

    D) 8 cm

    Answer: B

    Explanation: Volume = πr²h, so 301.44 = 3.14 × 4² × h, h = 301.44 / (3.14 × 16) = 6 cm.

74. A cone's volume is 235.5 cm³, and its height is 15 cm. What is its radius? (Use π = 3.14)

    A) 2 cm

    B) 3 cm

    C) 4 cm

    D) 5 cm

    Answer: B

    Explanation: Volume = (1/3)πr²h, so 235.5 = (1/3) × 3.14 × r² × 15, r² = (235.5 × 3) / (3.14 × 15) = 9, r = 3 cm.

75. The radius of a sphere is 10 cm. What is its surface area? (Use π = 3.14)

    A) 1256 cm²

    B) 1266 cm²

    C) 1276 cm²

    D) 1286 cm²

Answer: A

Explanation: Surface area = 4πr² = 4 × 3.14 × 10² = 1256 cm².

76. A cuboid has dimensions 15 cm, 10 cm, and 8 cm. What is its volume?

   A) 1100 cm³

   B) 1200 cm³

   C) 1300 cm³

   D) 1400 cm³

   Answer: B

   Explanation: Volume = length × breadth × height = 15 × 10 × 8 = 1200 cm³.

77. A cube's surface area is 294 cm². What is its volume?

   A) 333 cm³

   B) 343 cm³

   C) 353 cm³

   D) 363 cm³

   Answer: B

   Explanation: Surface area = 6 × side², so side² = 294 / 6 = 49, side = 7 cm. Volume = side³ = 7³ = 343 cm³.

78. The radius of a cylinder is 8 cm, and its height is 10 cm. What is its curved surface area? (Use π = 3.14)

   A) 502.4 cm²

   B) 512.4 cm²

   C) 522.4 cm²

   D) 532.4 cm²

   Answer: A

   Explanation: Curved surface area = 2πrh = 2 × 3.14 × 8 × 10 = 502.4 cm².

79. A cone has a radius of 4 cm and height of 3 cm. What is its total surface area? (Use π = 3.14)

   A) 113.04 cm²

   B) 123.04 cm²

C) 133.04 cm²
D) 143.04 cm²
Answer: A
Explanation: Slant height = √(4² + 3²) = 5 cm. Total surface area = πr(r + l) = 3.14 × 4 × (4 + 5) = 113.04 cm².

80. The radius of a sphere is 12 cm. What is its volume? (Use π = 3.14)
    A) 7234.56 cm³
    B) 7334.56 cm³
    C) 7434.56 cm³
    D) 7534.56 cm³
    Answer: A
    Explanation: Volume = (4/3)πr³ = (4/3) × 3.14 × 12³ = 7234.56 cm³.

81. A cuboid's volume is 900 cm³, with breadth 10 cm and height 5 cm. What is its length?
    A) 15 cm
    B) 16 cm
    C) 17 cm
    D) 18 cm
    Answer: D
    Explanation: Volume = length × breadth × height, so 900 = length × 10 × 5, length = 900 / (10 × 5) = 18 cm.

82. A cube has a side length of 10 cm. What is its volume?
    A) 900 cm³
    B) 1000 cm³
    C) 1100 cm³
    D) 1200 cm³
    Answer: B
    Explanation: Volume = side³ = 10³ = 1000 cm³.

83. The radius of a cylinder is 6 cm, and its height is 15 cm. What is its total surface area? (Use π = 3.14)
    A) 678.24 cm²

B) 688.24 cm²
C) 698.24 cm²
D) 708.24 cm²
Answer: A
Explanation: Total surface area = 2πr(r + h) = 2 × 3.14 × 6 × (6 + 15) = 678.24 cm².

84. A cone's volume is 314 cm³, and its radius is 5 cm. What is its height? (Use π = 3.14)
    A) 10 cm
    B) 11 cm
    C) 12 cm
    D) 13 cm
    Answer: C
    Explanation: Volume = (1/3)πr²h, so 314 = (1/3) × 3.14 × 5² × h, h = (314 × 3) / (3.14 × 25) = 12 cm.

85. The radius of a sphere is 15 cm. What is its surface area? (Use π = 3.14)
    A) 2720 cm²
    B) 2820 cm²
    C) 2920 cm²
    D) 3020 cm²
    Answer: B
    Explanation: Surface area = 4πr² = 4 × 3.14 × 15² = 2820 cm².

86. A cuboid has dimensions 20 cm, 12 cm, and 8 cm. What is its surface area?
    A) 832 cm²
    B) 842 cm²
    C) 852 cm²
    D) 862 cm²
    Answer: A
    Explanation: Surface area = 2(lb + bh + hl) = 2(20 × 12 + 12 × 8 + 8 × 20) = 2(240 + 96 + 160) = 832 cm².

87. A cube's volume is 512 cm³. What is its side length?
    A) 7 cm
    B) 8 cm
    C) 9 cm
    D) 10 cm
    Answer: B
    Explanation: Volume = side³, so side = $\sqrt[3]{512}$ = 8 cm.

88. The radius of a cylinder is 5 cm, and its volume is 785 cm³. What is its height? (Use π = 3.14)
    A) 9 cm
    B) 10 cm
    C) 11 cm
    D) 12 cm
    Answer: B
    Explanation: Volume = $\pi r^2 h$, so 785 = 3.14 × 5² × h, h = 785 / (3.14 × 25) = 10 cm.

89. A cone has a radius of 7 cm and height of 24 cm. What is its slant height?
    A) 25 cm
    B) 26 cm
    C) 27 cm
    D) 28 cm
    Answer: A
    Explanation: Slant height = $\sqrt{r^2 + h^2}$ = $\sqrt{7^2 + 24^2}$ = $\sqrt{49 + 576}$ = 25 cm.

90. The radius of a sphere is 9 cm. What is its volume? (Use π = 3.14)
    A) 3052.08 cm³
    B) 3152.08 cm³
    C) 3252.08 cm³
    D) 3352.08 cm³
    Answer: A

Explanation: Volume = $(4/3)\pi r^3$ = $(4/3) \times 3.14 \times 9^3$ = 3052.08 cm³.

91. A cuboid's volume is 480 cm³, with length 12 cm and breadth 8 cm. What is its height?
    A) 4 cm
    B) 5 cm
    C) 6 cm
    D) 7 cm
    Answer: B
    Explanation: Volume = length × breadth × height, so 480 = 12 × 8 × height, height = 480 / (12 × 8) = 5 cm.

92. A cube has a surface area of 216 cm². What is its volume?
    A) 196 cm³
    B) 216 cm³
    C) 236 cm³
    D) 256 cm³
    Answer: B
    Explanation: Surface area = 6 × side², so side² = 216 / 6 = 36, side = 6 cm. Volume = side³ = 6^3 = 216 cm³.

93. The radius of a cylinder is 8 cm, and its height is 12 cm. What is its curved surface area? (Use π = 3.14)
    A) 602.88 cm²
    B) 612.88 cm²
    C) 622.88 cm²
    D) 632.88 cm²
    Answer: A
    Explanation: Curved surface area = 2πrh = 2 × 3.14 × 8 × 12 = 602.88 cm².

94. A cone's volume is 942 cm³, and its height is 18 cm. What is its radius? (Use π = 3.14)
    A) 4 cm
    B) 5 cm

C) 6 cm

D) 7 cm

Answer: B

Explanation: Volume = (1/3)πr²h, so 942 = (1/3) × 3.14 × r² × 18, r² = (942 × 3) / (3.14 × 18) = 25, r = 5 cm.

95. The radius of a sphere is 18 cm. What is its surface area? (Use π = 3.14)

   A) 4069.44 cm²

   B) 4169.44 cm²

   C) 4269.44 cm²

   D) 4369.44 cm²

   Answer: A

   Explanation: Surface area = 4πr² = 4 × 3.14 × 18² = 4069.44 cm².

96. A cuboid has dimensions 16 cm, 10 cm, and 6 cm. What is its volume?

   A) 920 cm³

   B) 960 cm³

   C) 1000 cm³

   D) 1040 cm³

   Answer: B

   Explanation: Volume = length × breadth × height = 16 × 10 × 6 = 960 cm³.

97. A cube's volume is 729 cm³. What is its surface area?

   A) 474 cm²

   B) 486 cm²

   C) 498 cm²

   D) 510 cm²

   Answer: B

   Explanation: Volume = side³, so side = $\sqrt[3]{729}$ = 9 cm. Surface area = 6 × side² = 6 × 9² = 486 cm².

98. The radius of a cylinder is 10 cm, and its height is 20 cm. What is its total surface area? (Use π = 3.14)

A) 1884 cm²
B) 1894 cm²
C) 1904 cm²
D) 1914 cm²
Answer: A
Explanation: Total surface area = 2πr(r + h) = 2 × 3.14 × 10 × (10 + 20) = 1884 cm².

99. A cone has a radius of 6 cm and slant height of 10 cm. What is its total surface area? (Use π = 3.14)
A) 301.44 cm²
B) 311.44 cm²
C) 321.44 cm²
D) 331.44 cm²
Answer: A
Explanation: Total surface area = πr(r + l) = 3.14 × 6 × (6 + 10) = 301.44 cm².

100. The radius of a sphere is 6 cm. What is its volume? (Use π = 3.14)
A) 904.32 cm³
B) 914.32 cm³
C) 924.32 cm³
D) 934.32 cm³
Answer: A
Explanation: Volume = (4/3)πr³ = (4/3) × 3.14 × 6³ = 904.32 cm³.

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