



THE MATH HUB

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MENSURATION MCQs PERIMETER, AREA, SURFACE AREA & VOLUME

100 FULLY SOLVED MCQs

PPSC, FPSC & ONE PAPER EXAMS

NTS • CSS MPT • PMS • Government Job Tests

Perimeter • Area • Circle • Surface Area • Volume

Prepared by

MEHREEN KANWAL

MPhil Mathematics

RANA ALI HASAN

MPhil Mathematics

The Math Hub - themathhub.pk | 0301-4058484

The Science Academy - Chak No. 84 NB



MENSURATION MCQs: PERIMETER, AREA, SURFACE AREA & VOLUME | 100 FULLY SOLVED MCQs**Fast Foundation for One-Paper Exams****Rectangle and square**

$$P_{rect} = 2(l + w), \quad A_{rect} = lw, \quad P_{sq} = 4a, \quad A_{sq} = a^2$$

Triangle

$$A = \frac{1}{2}bh$$

Circle

$$C = 2\pi r, \quad A = \pi r^2$$

Cuboid and cube

$$V = lwh, \quad V_{cube} = a^3$$

Cylinder

$$V = \pi r^2 h, \quad TSA = 2\pi r(r + h)$$

Cone and sphere

$$V_{cone} = \frac{1}{3}\pi r^2 h, \quad V_{sphere} = \frac{4}{3}\pi r^3$$

Perimeter and Area: Rectangles and Squares

MCQ 1

Find the area of a rectangle of length 12 cm and width 7 cm.

- A. 84 cm^2 B. 38 cm^2
C. 96 cm^2 D. 77 cm^2

Solution

$$A = lw = 12(7) = 84 \text{ cm}^2$$

Final Answer

84 cm^2

MCQ 2

Find the area of a rectangle of length 15 cm and width 9 cm.

- A. 48 cm^2 B. 135 cm^2
C. 150 cm^2 D. 126 cm^2

Solution

$$A = lw = 15(9) = 135 \text{ cm}^2$$

Final Answer

135 cm^2

MCQ 3

Find the area of a rectangle of length 20 cm and width 6 cm.

- A. 52 cm^2 B. 140 cm^2
C. 120 cm^2 D. 114 cm^2

Solution

$$A = lw = 20(6) = 120 \text{ cm}^2$$

Final Answer

120 cm^2

MCQ 4

Find the area of a rectangle of length 18 cm and width 11 cm.

- A. 58 cm^2 B. 216 cm^2
C. 187 cm^2 D. 198 cm^2

Solution

$$A = lw = 18(11) = 198 \text{ cm}^2$$

Final Answer

198 cm^2

MCQ 5

Find the area of a rectangle of length 25 cm and width 8 cm.

- A. 200 cm^2 B. 66 cm^2
C. 225 cm^2 D. 192 cm^2

Solution

$$A = lw = 25(8) = 200 \text{ cm}^2$$

Final Answer

200 cm^2

MCQ 6

Find the area of a rectangle of length 14 cm and width 10 cm.

- A. 48 cm^2 B. 140 cm^2
C. 154 cm^2 D. 130 cm^2

Solution

$$A = lw = 14(10) = 140 \text{ cm}^2$$

Final Answer

140 cm^2

MCQ 7

Find the area of a rectangle of length 30 cm and width 12 cm.

- A. 84 cm^2 B. 390 cm^2
C. 360 cm^2 D. 348 cm^2

Solution

$$A = lw = 30(12) = 360 \text{ cm}^2$$

Final Answer

360 cm^2

MCQ 8

Find the area of a rectangle of length 16 cm and width 13 cm.

- A. 58 cm^2 B. 224 cm^2
C. 195 cm^2 D. 208 cm^2

Solution

$$A = lw = 16(13) = 208 \text{ cm}^2$$

Final Answer

208 cm^2

MCQ 9

Find the area of a rectangle of length 22 cm and width 5 cm.

- A. 110 cm^2 B. 54 cm^2
C. 132 cm^2 D. 105 cm^2

Solution

$$A = lw = 22(5) = 110 \text{ cm}^2$$

Final Answer**110 cm²****MCQ 10**

Find the area of a rectangle of length 24 cm and width 15 cm.

- A. 78 cm^2 B. 360 cm^2
C. 384 cm^2 D. 345 cm^2

Solution

$$A = lw = 24(15) = 360 \text{ cm}^2$$

Final Answer**360 cm²****MCQ 11**

Find the perimeter of a rectangle of length 8 cm and width 5 cm.

- A. 13 cm B. 40 cm
C. 26 cm D. 28 cm

Solution

$$P = 2(l + w) = 2(8 + 5) = 26 \text{ cm}$$

Final Answer**26 cm****MCQ 12**

Find the perimeter of a rectangle of length 13 cm and width 7 cm.

- A. 20 cm B. 91 cm
C. 42 cm D. 40 cm

Solution

$$P = 2(l + w) = 2(13 + 7) = 40 \text{ cm}$$

Final Answer**40 cm****MCQ 13**

Find the perimeter of a rectangle of length 21 cm and width 9 cm.

- A. 60 cm B. 30 cm
C. 189 cm D. 62 cm

Solution

$$P = 2(l + w) = 2(21 + 9) = 60 \text{ cm}$$

Final Answer**60 cm****MCQ 14**

Find the perimeter of a rectangle of length 17 cm and width 12 cm.

- A. 29 cm B. 58 cm
C. 204 cm D. 60 cm

Solution

$$P = 2(l + w) = 2(17 + 12) = 58 \text{ cm}$$

Final Answer**58 cm****MCQ 15**

Find the perimeter of a rectangle of length 26 cm and width 14 cm.

- A. 40 cm B. 364 cm
C. 80 cm D. 82 cm

Solution

$$P = 2(l + w) = 2(26 + 14) = 80 \text{ cm}$$

Final Answer**80 cm****MCQ 16**

Find the perimeter of a rectangle of length 10 cm and width 6 cm.

- A. 16 cm B. 60 cm
C. 34 cm D. 32 cm

Solution

$$P = 2(l + w) = 2(10 + 6) = 32 \text{ cm}$$

Final Answer**32 cm**

MCQ 17

Find the perimeter of a rectangle of length 19 cm and width 8 cm.

- A. 54 cm B. 27 cm
C. 152 cm D. 56 cm

Solution

$$P = 2(l + w) = 2(19 + 8) = 54 \text{ cm}$$

Final Answer

54 cm

MCQ 18

Find the perimeter of a rectangle of length 23 cm and width 11 cm.

- A. 34 cm B. 68 cm
C. 253 cm D. 70 cm

Solution

$$P = 2(l + w) = 2(23 + 11) = 68 \text{ cm}$$

Final Answer

68 cm

MCQ 19

Find the perimeter of a rectangle of length 30 cm and width 20 cm.

- A. 50 cm B. 600 cm
C. 100 cm D. 102 cm

Solution

$$P = 2(l + w) = 2(30 + 20) = 100 \text{ cm}$$

Final Answer

100 cm

MCQ 20

Find the perimeter of a rectangle of length 16 cm and width 4 cm.

- A. 20 cm B. 64 cm
C. 42 cm D. 40 cm

Solution

$$P = 2(l + w) = 2(16 + 4) = 40 \text{ cm}$$

Final Answer

40 cm

MCQ 21

Find the area of a square of side 6 cm.

- A. 36 cm^2 B. 42 cm^2
C. 30 cm^2 D. 12 cm^2

Solution

$$A = a^2 = 6^2 = 36 \text{ cm}^2$$

Final Answer 36 cm^2 **MCQ 22**

Find the perimeter of a square of side 9 cm.

- A. 45 cm B. 36 cm
C. 27 cm D. 18 cm

Solution

$$P = 4a = 4(9) = 36 \text{ cm}$$

Final Answer

36 cm

MCQ 23

Find the area of a square of side 12 cm.

- A. 156 cm^2 B. 132 cm^2
C. 144 cm^2 D. 24 cm^2

Solution

$$A = a^2 = 12^2 = 144 \text{ cm}^2$$

Final Answer 144 cm^2 **MCQ 24**

Find the perimeter of a square of side 15 cm.

- A. 75 cm B. 45 cm
C. 30 cm D. 60 cm

Solution

$$P = 4a = 4(15) = 60 \text{ cm}$$

Final Answer

60 cm

MCQ 25

Find the area of a square of side 20 cm.

- A. 400 cm^2 B. 420 cm^2
C. 380 cm^2 D. 40 cm^2

Solution

$$A = a^2 = 20^2 = 400 \text{ cm}^2$$

Final Answer 400 cm^2

Triangles, Parallelograms and Trapezia**MCQ 26**

Find the area of a triangle with base 10 cm and height 6 cm.

- A. 60 cm^2 B. 30 cm^2
C. 35 cm^2 D. 25 cm^2

Solution

$$A = \frac{1}{2}bh = \frac{1}{2}(10)(6) = 30 \text{ cm}^2$$

Final Answer**30 cm²****MCQ 27**

Find the area of a triangle with base 12 cm and height 9 cm.

- A. 108 cm^2 B. 59 cm^2
C. 54 cm^2 D. 49 cm^2

Solution

$$A = \frac{1}{2}bh = \frac{1}{2}(12)(9) = 54 \text{ cm}^2$$

Final Answer**54 cm²****MCQ 28**

Find the area of a triangle with base 15 cm and height 8 cm.

- A. 120 cm^2 B. 65 cm^2
C. 55 cm^2 D. 60 cm^2

Solution

$$A = \frac{1}{2}bh = \frac{1}{2}(15)(8) = 60 \text{ cm}^2$$

Final Answer**60 cm²****MCQ 29**

Find the area of a triangle with base 18 cm and height 7 cm.

- A. 63 cm^2 B. 126 cm^2
C. 68 cm^2 D. 58 cm^2

Solution

$$A = \frac{1}{2}bh = \frac{1}{2}(18)(7) = 63 \text{ cm}^2$$

Final Answer**63 cm²****MCQ 30**

Find the area of a triangle with base 20 cm and height 11 cm.

- A. 220 cm^2 B. 110 cm^2
C. 115 cm^2 D. 105 cm^2

Solution

$$A = \frac{1}{2}bh = \frac{1}{2}(20)(11) = 110 \text{ cm}^2$$

Final Answer**110 cm²****MCQ 31**

Find the area of a triangle with base 24 cm and height 10 cm.

- A. 240 cm^2 B. 125 cm^2
C. 120 cm^2 D. 115 cm^2

Solution

$$A = \frac{1}{2}bh = \frac{1}{2}(24)(10) = 120 \text{ cm}^2$$

Final Answer**120 cm²****MCQ 32**

Find the area of a triangle with base 14 cm and height 12 cm.

- A. 168 cm^2 B. 89 cm^2
C. 79 cm^2 D. 84 cm^2

Solution

$$A = \frac{1}{2}bh = \frac{1}{2}(14)(12) = 84 \text{ cm}^2$$

Final Answer**84 cm²****MCQ 33**

Find the area of a triangle with base 16 cm and height 5 cm.

- A. 40 cm^2 B. 80 cm^2
C. 45 cm^2 D. 35 cm^2

Solution

$$A = \frac{1}{2}bh = \frac{1}{2}(16)(5) = 40 \text{ cm}^2$$

Final Answer**40 cm²**

MCQ 34

Find the area of a triangle with base 30 cm and height 8 cm.

- A. 240 cm^2 B. 120 cm^2
C. 125 cm^2 D. 115 cm^2

Solution

$$A = \frac{1}{2}bh = \frac{1}{2}(30)(8) = 120 \text{ cm}^2$$

Final Answer**120 cm²****MCQ 35**

Find the area of a triangle with base 22 cm and height 9 cm.

- A. 198 cm^2 B. 104 cm^2
C. 99 cm^2 D. 94 cm^2

Solution

$$A = \frac{1}{2}bh = \frac{1}{2}(22)(9) = 99 \text{ cm}^2$$

Final Answer**99 cm²****MCQ 36**

Find the area of a parallelogram with base 8 cm and perpendicular height 7 cm.

- A. 28 cm^2 B. 64 cm^2
C. 112 cm^2 D. 56 cm^2

Solution

$$A = bh = 8(7) = 56 \text{ cm}^2$$

Final Answer**56 cm²****MCQ 37**

Find the area of a parallelogram with base 12 cm and perpendicular height 5 cm.

- A. 60 cm^2 B. 30 cm^2
C. 72 cm^2 D. 120 cm^2

Solution

$$A = bh = 12(5) = 60 \text{ cm}^2$$

Final Answer**60 cm²****MCQ 38**

Find the area of a parallelogram with base 15 cm and perpendicular height 9 cm.

- A. $\frac{135}{2} \text{ cm}^2$ B. 135 cm^2
C. 150 cm^2 D. 270 cm^2

Solution

$$A = bh = 15(9) = 135 \text{ cm}^2$$

Final Answer**135 cm²****MCQ 39**

Find the area of a parallelogram with base 20 cm and perpendicular height 6 cm.

- A. 60 cm^2 B. 140 cm^2
C. 120 cm^2 D. 240 cm^2

Solution

$$A = bh = 20(6) = 120 \text{ cm}^2$$

Final Answer**120 cm²****MCQ 40**

Find the area of a parallelogram with base 18 cm and perpendicular height 11 cm.

- A. 99 cm^2 B. 216 cm^2
C. 396 cm^2 D. 198 cm^2

Solution

$$A = bh = 18(11) = 198 \text{ cm}^2$$

Final Answer**198 cm²****MCQ 41**

Find the area of a trapezium with parallel sides 8 cm and 12 cm and height 5 cm.

- A. 50 cm^2 B. 55 cm^2
C. 45 cm^2 D. 100 cm^2

Solution

$$A = \frac{1}{2}(a + b)h = \frac{1}{2}(8 + 12)(5) = 50 \text{ cm}^2$$

Final Answer**50 cm²**

MCQ 42

Find the area of a trapezium with parallel sides 10 cm and 16 cm and height 7 cm.

- A. 98 cm² B. 91 cm²
C. 84 cm² D. 182 cm²

Solution

$$A = \frac{1}{2}(a + b)h = \frac{1}{2}(10 + 16)(7) = 91 \text{ cm}^2$$

Final Answer91 cm²**MCQ 43**

Find the area of a trapezium with parallel sides 6 cm and 14 cm and height 9 cm.

- A. 99 cm² B. 81 cm²
C. 90 cm² D. 180 cm²

Solution

$$A = \frac{1}{2}(a + b)h = \frac{1}{2}(6 + 14)(9) = 90 \text{ cm}^2$$

Final Answer90 cm²**MCQ 44**

Find the area of a trapezium with parallel sides 15 cm and 25 cm and height 8 cm.

- A. 168 cm² B. 152 cm²
C. 320 cm² D. 160 cm²

Solution

$$A = \frac{1}{2}(a + b)h = \frac{1}{2}(15 + 25)(8) = 160 \text{ cm}^2$$

Final Answer160 cm²**MCQ 45**

Find the area of a trapezium with parallel sides 12 cm and 18 cm and height 10 cm.

- A. 150 cm² B. 160 cm²
C. 140 cm² D. 300 cm²

Solution

$$A = \frac{1}{2}(a + b)h = \frac{1}{2}(12 + 18)(10) = 150 \text{ cm}^2$$

Final Answer150 cm²**Circles and Semicircles****MCQ 46**

Using $\pi = 22/7$, find the area of a circle of radius 7 cm.

- A. 176 cm² B. 154 cm²
C. 132 cm² D. 308 cm²

Solution

$$A = \pi r^2 = \frac{22}{7}(7)^2 = 154 \text{ cm}^2$$

Final Answer154 cm²**MCQ 47**

Using $\pi = 22/7$, find the area of a circle of radius 14 cm.

- A. 638 cm² B. 594 cm²
C. 616 cm² D. 1,232 cm²

Solution

$$A = \pi r^2 = \frac{22}{7}(14)^2 = 616 \text{ cm}^2$$

Final Answer616 cm²**MCQ 48**

Using $\pi = 22/7$, find the area of a circle of radius 21 cm.

- A. 1,408 cm² B. 1,364 cm²
C. 2,772 cm² D. 1,386 cm²

Solution

$$A = \pi r^2 = \frac{22}{7}(21)^2 = 1,386 \text{ cm}^2$$

Final Answer1,386 cm²**MCQ 49**

Using $\pi = 22/7$, find the area of a circle of radius 28 cm.

- A. 2,464 cm² B. 2,486 cm²
C. 2,442 cm² D. 4,928 cm²

Solution

$$A = \pi r^2 = \frac{22}{7}(28)^2 = 2,464 \text{ cm}^2$$

Final Answer2,464 cm²

MCQ 50

Using $\pi = 22/7$, find the area of a circle of radius 35 cm.

- A. 3,872 cm² B. 3,850 cm²
C. 3,828 cm² D. 7,700 cm²

Solution

$$A = \pi r^2 = \frac{22}{7}(35)^2 = 3,850 \text{ cm}^2$$

Final Answer3,850 cm²**MCQ 51**

Using $\pi = 22/7$, find the area of a circle of radius 7/2 cm.

- A. $\frac{121}{2}$ cm² B. $\frac{33}{2}$ cm²
C. $\frac{77}{2}$ cm² D. 77 cm²

Solution

$$A = \pi r^2 = \frac{22}{7}\left(\frac{7}{2}\right)^2 = \frac{77}{2} \text{ cm}^2$$

Final Answer $\frac{77}{2}$ cm²**MCQ 52**

Using $\pi = 22/7$, find the area of a circle of radius 21/2 cm.

- A. $\frac{737}{2}$ cm² B. $\frac{649}{2}$ cm²
C. 693 cm² D. $\frac{693}{2}$ cm²

Solution

$$A = \pi r^2 = \frac{22}{7}\left(\frac{21}{2}\right)^2 = \frac{693}{2} \text{ cm}^2$$

Final Answer $\frac{693}{2}$ cm²**MCQ 53**

Using $\pi = 22/7$, find the area of a circle of radius 35/2 cm.

- A. $\frac{1925}{2}$ cm² B. $\frac{1969}{2}$ cm²
C. $\frac{1881}{2}$ cm² D. 1,925 cm²

Solution

$$A = \pi r^2 = \frac{22}{7}\left(\frac{35}{2}\right)^2 = \frac{1925}{2} \text{ cm}^2$$

Final Answer $\frac{1925}{2}$ cm²**MCQ 54**

Using $\pi = 22/7$, find the circumference of a circle of radius 7 cm.

- A. 22 cm B. 44 cm
C. 66 cm D. 45 cm

Solution

$$C = 2\pi r = 2\left(\frac{22}{7}\right)(7) = 44 \text{ cm}$$

Final Answer

44 cm

MCQ 55

Using $\pi = 22/7$, find the circumference of a circle of radius 14 cm.

- A. 44 cm B. 110 cm
C. 88 cm D. 66 cm

Solution

$$C = 2\pi r = 2\left(\frac{22}{7}\right)(14) = 88 \text{ cm}$$

Final Answer

88 cm

MCQ 56

Using $\pi = 22/7$, find the circumference of a circle of radius 21 cm.

- A. 66 cm B. 154 cm
C. 110 cm D. 132 cm

Solution

$$C = 2\pi r = 2\left(\frac{22}{7}\right)(21) = 132 \text{ cm}$$

Final Answer

132 cm

MCQ 57

Using $\pi = 22/7$, find the circumference of a circle of radius 28 cm.

- A. 176 cm B. 88 cm
C. 198 cm D. 154 cm

Solution

$$C = 2\pi r = 2\left(\frac{22}{7}\right)(28) = 176 \text{ cm}$$

Final Answer

176 cm

MCQ 58

Using $\pi = 22/7$, find the circumference of a circle of radius 35 cm.

- A. 110 cm B. 220 cm
C. 242 cm D. 198 cm

Solution

$$C = 2\pi r = 2 \left(\frac{22}{7} \right) (35) = 220 \text{ cm}$$

Final Answer

220 cm

MCQ 59

Using $\pi = 22/7$, find the circumference of a circle of radius $7/2$ cm.

- A. 11 cm B. 44 cm
C. 22 cm D. 1 cm

Solution

$$C = 2\pi r = 2 \left(\frac{22}{7} \right) \left(\frac{7}{2} \right) = 22 \text{ cm}$$

Final Answer

22 cm

MCQ 60

Using $\pi = 22/7$, find the circumference of a circle of radius $21/2$ cm.

- A. 33 cm B. 88 cm
C. 44 cm D. 66 cm

Solution

$$C = 2\pi r = 2 \left(\frac{22}{7} \right) \left(\frac{21}{2} \right) = 66 \text{ cm}$$

Final Answer

66 cm

Surface Area and Volume of Solids**MCQ 61**

Find the volume of a cube of side 3 cm.

- A. 27 cm^3 B. 54 cm^3
C. 9 cm^3 D. 12 cm^3

Solution

$$V = a^3 = 3^3 = 27 \text{ cm}^3$$

Final Answer 27 cm^3 **MCQ 62**

Find the volume of a cube of side 4 cm.

- A. 96 cm^3 B. 64 cm^3
C. 16 cm^3 D. 65 cm^3

Solution

$$V = a^3 = 4^3 = 64 \text{ cm}^3$$

Final Answer 64 cm^3 **MCQ 63**

Find the volume of a cube of side 5 cm.

- A. 150 cm^3 B. 25 cm^3
C. 125 cm^3 D. 20 cm^3

Solution

$$V = a^3 = 5^3 = 125 \text{ cm}^3$$

Final Answer 125 cm^3 **MCQ 64**

Find the volume of a cube of side 6 cm.

- A. 36 cm^3 B. 24 cm^3
C. 217 cm^3 D. 216 cm^3

Solution

$$V = a^3 = 6^3 = 216 \text{ cm}^3$$

Final Answer 216 cm^3 **MCQ 65**

Find the volume of a cube of side 8 cm.

- A. 512 cm^3 B. 384 cm^3
C. 64 cm^3 D. 32 cm^3

Solution

$$V = a^3 = 8^3 = 512 \text{ cm}^3$$

Final Answer 512 cm^3 **MCQ 66**

Find the total surface area of a cube of side 3 cm.

- A. 27 cm^2 B. 54 cm^2
C. 36 cm^2 D. 60 cm^2

Solution

$$TSA = 6a^2 = 6(3^2) = 54 \text{ cm}^2$$

Final Answer 54 cm^2

MCQ 67

Find the total surface area of a cube of side 5 cm.

A. 125 cm²**B.** 100 cm²**C.** 150 cm²**D.** 156 cm²**Solution**

$$TSA = 6a^2 = 6(5^2) = 150 \text{ cm}^2$$

Final Answer150 cm²**MCQ 68**

Find the total surface area of a cube of side 7 cm.

A. 343 cm²**B.** 196 cm²**C.** 300 cm²**D.** 294 cm²**Solution**

$$TSA = 6a^2 = 6(7^2) = 294 \text{ cm}^2$$

Final Answer294 cm²**MCQ 69**

Find the total surface area of a cube of side 9 cm.

A. 486 cm²**B.** 729 cm²**C.** 324 cm²**D.** 492 cm²**Solution**

$$TSA = 6a^2 = 6(9^2) = 486 \text{ cm}^2$$

Final Answer486 cm²**MCQ 70**

Find the total surface area of a cube of side 10 cm.

A. 1000 cm²**B.** 600 cm²**C.** 400 cm²**D.** 606 cm²**Solution**

$$TSA = 6a^2 = 6(10^2) = 600 \text{ cm}^2$$

Final Answer600 cm²**MCQ 71**

Find the volume of a cuboid 8 cm × 5 cm × 4 cm.

A. 44 cm³**B.** 184 cm³**C.** 160 cm³**D.** 164 cm³**Solution**

$$V = lwh = 8(5)(4) = 160 \text{ cm}^3$$

Final Answer160 cm³**MCQ 72**

Find the volume of a cuboid 10 cm × 6 cm × 3 cm.

A. 63 cm³**B.** 216 cm³**C.** 183 cm³**D.** 180 cm³**Solution**

$$V = lwh = 10(6)(3) = 180 \text{ cm}^3$$

Final Answer180 cm³**MCQ 73**

Find the volume of a cuboid 12 cm × 7 cm × 5 cm.

A. 420 cm³**B.** 89 cm³**C.** 358 cm³**D.** 425 cm³**Solution**

$$V = lwh = 12(7)(5) = 420 \text{ cm}^3$$

Final Answer420 cm³**MCQ 74**

Find the volume of a cuboid 15 cm × 8 cm × 6 cm.

A. 126 cm³**B.** 720 cm³**C.** 516 cm³**D.** 726 cm³**Solution**

$$V = lwh = 15(8)(6) = 720 \text{ cm}^3$$

Final Answer720 cm³**MCQ 75**

Find the volume of a cuboid 20 cm × 10 cm × 4 cm.

A. 204 cm³**B.** 640 cm³**C.** 800 cm³**D.** 804 cm³**Solution**

$$V = lwh = 20(10)(4) = 800 \text{ cm}^3$$

Final Answer800 cm³

MCQ 76

Using $\pi = 22/7$, find the volume of a cylinder of radius 7 cm and height 5 cm.

- A. 154 cm^3 B. 814 cm^3
C. 726 cm^3 D. 770 cm^3

Solution

$$V = \pi r^2 h = \frac{22}{7} (7^2)(5) = 770 \text{ cm}^3$$

Final Answer**770 cm³****MCQ 77**

Using $\pi = 22/7$, find the volume of a cylinder of radius 7 cm and height 10 cm.

- A. $1,540 \text{ cm}^3$ B. 154 cm^3
C. $1,584 \text{ cm}^3$ D. $1,496 \text{ cm}^3$

Solution

$$V = \pi r^2 h = \frac{22}{7} (7^2)(10) = 1,540 \text{ cm}^3$$

Final Answer**1,540 cm³****MCQ 78**

Using $\pi = 22/7$, find the volume of a cylinder of radius 14 cm and height 6 cm.

- A. 616 cm^3 B. $3,696 \text{ cm}^3$
C. $3,740 \text{ cm}^3$ D. $3,652 \text{ cm}^3$

Solution

$$V = \pi r^2 h = \frac{22}{7} (14^2)(6) = 3,696 \text{ cm}^3$$

Final Answer**3,696 cm³****MCQ 79**

Using $\pi = 22/7$, find the volume of a cylinder of radius 14 cm and height 12 cm.

- A. 616 cm^3 B. $7,436 \text{ cm}^3$
C. $7,392 \text{ cm}^3$ D. $7,348 \text{ cm}^3$

Solution

$$V = \pi r^2 h = \frac{22}{7} (14^2)(12) = 7,392 \text{ cm}^3$$

Final Answer**7,392 cm³****MCQ 80**

Using $\pi = 22/7$, find the volume of a cylinder of radius 21 cm and height 4 cm.

- A. $1,386 \text{ cm}^3$ B. $5,588 \text{ cm}^3$
C. $5,500 \text{ cm}^3$ D. $5,544 \text{ cm}^3$

Solution

$$V = \pi r^2 h = \frac{22}{7} (21^2)(4) = 5,544 \text{ cm}^3$$

Final Answer**5,544 cm³****MCQ 81**

Using $\pi = 22/7$, find the volume of a cone of radius 7 cm and height 6 cm.

- A. 308 cm^3 B. 924 cm^3
C. 330 cm^3 D. 286 cm^3

Solution

$$V = \frac{1}{3} \pi r^2 h = \frac{1}{3} \left(\frac{22}{7} \right) (7^2)(6) = 308 \text{ cm}^3$$

Final Answer**308 cm³****MCQ 82**

Using $\pi = 22/7$, find the volume of a cone of radius 7 cm and height 9 cm.

- A. $1,386 \text{ cm}^3$ B. 462 cm^3
C. 484 cm^3 D. 440 cm^3

Solution

$$V = \frac{1}{3} \pi r^2 h = \frac{1}{3} \left(\frac{22}{7} \right) (7^2)(9) = 462 \text{ cm}^3$$

Final Answer**462 cm³****MCQ 83**

Using $\pi = 22/7$, find the volume of a cone of radius 14 cm and height 3 cm.

- A. $1,848 \text{ cm}^3$ B. 638 cm^3
C. 616 cm^3 D. 594 cm^3

Solution

$$V = \frac{1}{3} \pi r^2 h = \frac{1}{3} \left(\frac{22}{7} \right) (14^2)(3) = 616 \text{ cm}^3$$

Final Answer**616 cm³**

MCQ 84

Using $\pi = 22/7$, find the volume of a cone of radius 14 cm and height 6 cm.

- A. 3,696 cm³ B. 1,254 cm³
C. 1,210 cm³ D. 1,232 cm³

Solution

$$V = \frac{1}{3}\pi r^2 h = \frac{1}{3}\left(\frac{22}{7}\right)(14^2)(6) = 1,232 \text{ cm}^3$$

Final Answer1,232 cm³**MCQ 85**

Using $\pi = 22/7$, find the volume of a cone of radius 21 cm and height 3 cm.

- A. 1,386 cm³ B. 4,158 cm³
C. 1,408 cm³ D. 1,364 cm³

Solution

$$V = \frac{1}{3}\pi r^2 h = \frac{1}{3}\left(\frac{22}{7}\right)(21^2)(3) = 1,386 \text{ cm}^3$$

Final Answer1,386 cm³**MCQ 86**

Using $\pi = 22/7$, find the volume of a sphere of radius 3 cm.

- A. $\frac{198}{7}$ cm³ B. $\frac{792}{7}$ cm³
C. $\frac{1100}{7}$ cm³ D. $\frac{484}{7}$ cm³

Solution

$$V = \frac{4}{3}\pi r^3 = \frac{4}{3}\left(\frac{22}{7}\right)(3^3) = \frac{792}{7} \text{ cm}^3$$

Final Answer $\frac{792}{7}$ cm³**MCQ 87**

Using $\pi = 22/7$, find the volume of a sphere of radius 6 cm.

- A. $\frac{792}{7}$ cm³ B. $\frac{6644}{7}$ cm³
C. $\frac{6336}{7}$ cm³ D. $\frac{6028}{7}$ cm³

Solution

$$V = \frac{4}{3}\pi r^3 = \frac{4}{3}\left(\frac{22}{7}\right)(6^3) = \frac{6336}{7} \text{ cm}^3$$

Final Answer $\frac{6336}{7}$ cm³**MCQ 88**

Using $\pi = 22/7$, find the volume of a sphere of radius 7 cm.

- A. 154 cm³ B. $\frac{4444}{3}$ cm³
C. $\frac{4180}{3}$ cm³ D. $\frac{4312}{3}$ cm³

Solution

$$V = \frac{4}{3}\pi r^3 = \frac{4}{3}\left(\frac{22}{7}\right)(7^3) = \frac{4312}{3} \text{ cm}^3$$

Final Answer $\frac{4312}{3}$ cm³**MCQ 89**

Using $\pi = 22/7$, find the volume of a sphere of radius 9 cm.

- A. $\frac{21384}{7}$ cm³ B. $\frac{1782}{7}$ cm³
C. $\frac{21692}{7}$ cm³ D. $\frac{21076}{7}$ cm³

Solution

$$V = \frac{4}{3}\pi r^3 = \frac{4}{3}\left(\frac{22}{7}\right)(9^3) = \frac{21384}{7} \text{ cm}^3$$

Final Answer $\frac{21384}{7}$ cm³**MCQ 90**

Using $\pi = 22/7$, find the volume of a sphere of radius 14 cm.

- A. 616 cm³ B. $\frac{34496}{3}$ cm³
C. $\frac{34628}{3}$ cm³ D. $\frac{34364}{3}$ cm³

Solution

$$V = \frac{4}{3}\pi r^3 = \frac{4}{3}\left(\frac{22}{7}\right)(14^3) = \frac{34496}{3} \text{ cm}^3$$

Final Answer $\frac{34496}{3}$ cm³**Mixed High-Yield Mensuration****MCQ 91**

A square has area 144 cm². Find its side.

- A. 10 B. 14
C. 12 D. 24

Solution

$$a = \sqrt{144} = 12 \text{ cm}$$

Final Answer

12 cm

MCQ 92

A rectangle has area 96 cm^2 and length 12 cm . Find its width.

- A. 6
B. 10
C. 12
D. 8

Solution

$$w = \frac{A}{l} = \frac{96}{12} = 8 \text{ cm}$$

Final Answer

8 cm

MCQ 93

A rectangle has perimeter 50 cm and length 15 cm . Find its width.

- A. 10
B. 5
C. 15
D. 20

Solution

$$2(l + w) = 50 \Rightarrow l + w = 25$$

$$w = 25 - 15 = 10 \text{ cm}$$

Final Answer

10 cm

MCQ 94

A circle has diameter 14 cm . Using $\pi = 22/7$, find its area.

- A. 44
B. 154
C. 308
D. 616

Solution

$$r = 7$$

$$A = \frac{22}{7}(7)^2 = 154 \text{ cm}^2$$

Final Answer154 cm²**MCQ 95**

Convert 2.5 m^2 to cm^2 .

- A. 250
B. 2500
C. 25000
D. 250000

Solution

$$1 \text{ m}^2 = 10,000 \text{ cm}^2$$

$$2.5 \times 10,000 = 25,000 \text{ cm}^2$$

Final Answer25,000 cm²**MCQ 96**

Convert 3 litres to cubic centimetres.

- A. 300
B. 30
C. 30000
D. 3000

Solution

$$1 \text{ L} = 1000 \text{ cm}^3$$

$$3 \text{ L} = 3000 \text{ cm}^3$$

Final Answer3000 cm³**MCQ 97**

A cube has volume 512 cm^3 . Find its side.

- A. 8
B. 6
C. 16
D. 64

Solution

$$a = \sqrt[3]{512} = 8 \text{ cm}$$

Final Answer

8 cm

MCQ 98

A cylinder has base area 154 cm^2 and height 10 cm . Find its volume.

- A. 154
B. 1540
C. 15400
D. 1640

Solution

$$V = (\text{base area})(h) = 154(10) = 1540 \text{ cm}^3$$

Final Answer1540 cm³**MCQ 99**

A triangular prism has triangular cross-section area 24 cm^2 and length 10 cm . Find its volume.

- A. 120
B. 34
C. 240
D. 480

Solution

$$V = (24)(10) = 240 \text{ cm}^3$$

Final Answer240 cm³

MCQ 100

A square field has perimeter 80 m. Find its area.

A. 80 **B.** 160

C. 800 **D.** 400

Solution

$$4a = 80 \Rightarrow a = 20$$

$$A = 20^2 = 400 \text{ m}^2$$

Final Answer**400 m²**

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Units Perimeter uses linear units, area uses square units, volume uses cubic units.

Circle Use $\pi = 22/7$ when the data are chosen for exact arithmetic unless told otherwise.

Prism

$$V = (\text{area of cross-section})(\text{length})$$

Cylinder Curved surface area = $2\pi rh$.

Cone Slant height $l = \sqrt{r^2 + h^2}$ when needed.

Exam check Write the formula first, substitute values, and attach the correct unit.

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