Acumen Teach
To the point

Geometry Master-box

Geometry —Measurements—Mathematical knowledge application—Data Analysis—Calculator—Shapes— Real life and context application.

Easy (12 Questions)	/12
Moderate(12 Questions)	/24
Difficult(12 Questions)	/36
Total Marks	**/72**
How did you do?	

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2 hours

38 Questions

Section A: Easy Questions (1 mark each)

1. **Answer:** 120°
   - Each interior angle of a regular hexagon = $\frac{(6-2)\times 180}{6} = 120^\circ$.
2. **Answer:** 40 cm²
   - Area = $8 \times 5 = 40$ cm².
3. **Answer:** 43.96 cm
   - Circumference = $2 \times 3.14 \times 7 = 43.96$ cm.
4. **Answer:** Right-angled triangle
   - A triangle with a 90° angle is right-angled.
5. **Answer:** 5200 m
   - $5.2 \times 1000 = 5200$ m.
6. **Answer:** 24 cm
   - Perimeter = $4 \times 6 = 24$ cm.
7. **Answer:** 64 cm³
   - Volume = $4^3 = 64$ cm³.
8. **Answer:** 72°
   - Each exterior angle of a regular pentagon = $\frac{360}{5} = 72^\circ$.
9. **Answer:** 5 cm
   - Radius = $\frac{10}{2} = 5$ cm.
10. **Answer:** 30 cm²
    - Area = $\frac{1}{2} \times 10 \times 6 = 30$ cm².
11. **Answer:** 360°
    - Sum of interior angles of a quadrilateral = 360°.
12. **Answer:** 4.5 kg
    - $4500 \div 1000 = 4.5$ kg.

Section B: Medium Questions (2 marks each)

13. **Answer:** 84 cm²
    - Area = $12 \times 7 = 84$ cm².
14. **Answer:** 25.12 cm²
    - Area of sector = $\frac{45}{360} \times 3.14 \times 8^2 = 25.12$ cm².
15. **Answer:** 32 cm²
    - Area = $\frac{1}{2} \times (10 + 6) \times 4 = 32$ cm².
16. **Answer:** 942 cm³
    - Volume = $3.14 \times 5^2 \times 12 = 942$ cm³.
17. **Answer:** 10 cm
    - Hypotenuse = $\sqrt{6^2 + 8^2} = \sqrt{100} = 10$ cm.
18. **Answer:** 18 sides
    - Number of sides = $\frac{360}{20} = 18$.
19. **Answer:** 34 cm
    - Perimeter = $2(12 + 5) = 34$ cm.
20. **Answer:** 5 cm
    - Radius = $\frac{31.4}{2 \times 3.14} = 5$ cm.
21. **Answer:** 150 cm³
    - Volume = $15 \times 10 = 150$ cm³.
22. **Answer:** 40 cm²
    - Area = $\frac{1}{2} \times 10 \times 8 = 40$ cm².
23. **Answer:** 5 cm
    - Edge length = $\sqrt{\frac{150}{6}} = 5$ cm.
24. **Answer:** 5 cm
    - Radius = $\sqrt{\frac{78.5}{3.14}} = 5$ cm.

Section C: Hard Questions (3 marks each)

25. **Answer:** 93.6 cm²
    - Area = $\frac{3\sqrt{3}}{2} \times 6^2 = 93.6$ cm².
26. **Answer:** 282.6 cm²
    - Total surface area = $3.14 \times 5^2 + 3.14 \times 5 \times 13 = 282.6$ cm².
27. **Answer:** 3077.2 cm³
    - Volume = $3.14 \times 7^2 \times 20 = 3077.2$ cm³.
28. **Answer:** 12 cm
    - Other side = $\sqrt{15^2 - 9^2} = \sqrt{144} = 12$ cm.
29. **Answer:** 57.3°
    - Angle = $\frac{50 \times 360}{3.14 \times 10^2} = 57.3^\circ$.
30. **Answer:** 6 cm
    - Height = $\frac{240}{8 \times 5} = 6$ cm.
31. **Answer:** 56 cm
    - Perimeter = $8 \times 7 = 56$ cm.
32. **Answer:** 904.32 cm³
    - Volume = $\frac{4}{3} \times 3.14 \times 6^3 = 904.32$ cm³.
33. **Answer:** Correct
    - Area = $\frac{1}{2} \times (8 + 12) \times 5 = 50$ cm². The given area is incorrect.
34. **Answer:** 314 cm²
    - Radius = $\frac{62.8}{2 \times 3.14} = 10$ cm. Area = $3.14 \times 10^2 = 314$ cm².
35. **Answer:** 6 cm
    - Height = $\frac{72}{12} = 6$ cm.
36. **Answer:** 400 cm³
    - Volume = $\frac{1}{3} \times 10^2 \times 12 = 400$ cm³.