# Area Volume and Surface Area

**Quiz 1**

Standards 6.EE.B.7, 6.G.A.1

Learning target I can apply the skills taught so far, show my reasoning, and check my answers.

Assessment 5 open-response questions. Questions 1–1 review Unit 7; the remaining 4 assess this unit. Review accounts for exactly 20% of questions and points.

**Administration**

0–5 minutes Distribute only the attached student assessment pages. Read directions and confirm students have pencils, rulers, and extra plotting paper when needed. Ask for calculations, models, labels, and explanations where requested.

5–30 minutes Students complete the quiz independently. Follow the course policy of doing arithmetic by hand unless an established classroom accommodation applies.

Final minutes Collect responses and ask students to note one item they want to revisit. Use the remaining time for guided correction and explanation after collecting the initial responses.

**Scoring and Feedback**

4 points each, 20 total: 2 for method or model, 1 for an accurate result, 1 for requested units, explanation, or check. For a simple item, the final point rewards clear notation.

Score prior-unit review separately from current-unit work. Accept equivalent exact answers and valid alternate methods. For drawings, use the coordinate, face, frequency, or summary information in the attached key to check the representation.

Suggested follow-up based on current-unit items: 80% or above, continue with brief corrections; 60–79%, provide targeted small-group support; below 60%, reteach with models. These are instructional suggestions, not state proficiency cut scores.

Likely misconceptions Watch perpendicular height, missing faces, and square versus cubic units.

Name _____ Date _____

# Area Volume and Surface Area

## Quiz 1

Standards assessed 6.EE.B.7, 6.G.A.1

Questions 1–1 review Unit 7 (20%). The remaining questions assess this unit. Show work, simplify exact answers, label units, and justify models or explanations. 4 points per question; 20 points total.

1. [Review] Solve x + 5 = 9. Check in the original equation.

2. [Current unit] Sketch a triangle with base 16 cm and perpendicular height 4 cm. Find its area.

3. [Current unit] Sketch a triangle with base 16 cm and perpendicular height 2 cm. Find its area.

4. [Current unit] A trapezoid has parallel bases 6 m and 12 m and perpendicular height 7 m. Sketch it and find its area.

5. [Current unit] A 6 m by 5 m rectangle has a right-triangle corner removed with perpendicular legs 2 m and 3 m. Sketch the remaining polygon and find its area.

# Quiz 1

Area Volume and Surface Area

1. x = 4
Reasoning Subtract 5 on both sides. Then x = 4; substitution gives 9 on each side.

2. 32 cm²
Reasoning A = bh/2 = 16 × 4 ÷ 2 = 32. Two such triangles make a parallelogram.

3. 16 cm²
Reasoning A = bh/2 = 16 × 2 ÷ 2 = 16. Two such triangles make a parallelogram.

4. 63 m²
Reasoning A = (6 + 12) × 7 ÷ 2 = 63.

5. 27 m²
Reasoning Whole rectangle 30; remove triangle 3; difference 27.