Area Volume and Surface Area

Quiz 2

Standards 6.EE.B.5, 6.EE.B.8, 6.G.A.3, 6.G.A.1, 6.G.A.2

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 _____

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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] Which values in {8, 9, 10} satisfy x ≤ 9? Test each by substitution.

2. [Current unit] Plot and connect (-2,-2), (4,-2), (4,4), (-2,4). Find the side lengths and area.

3. [Current unit] A rectangular prism has edges 1 1/2, 1 1/2, and 3 cm. Sketch it and find its volume.

4. [Current unit] A rectangular prism has edges 3, 3, and 1 1/2 cm. Sketch it and find its volume. Show both lwh and Bh.

5. [Current unit] Fill a prism 4/3 × 2 × 2 units with cubes of edge 1/3 unit. How many cubes fit? Use their volumes to verify lwh.

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1. 8, 9
Reasoning Values below 9 work; the endpoint works too.

2. Sides 6 and 6; area 36 square units
Reasoning Horizontal length 4 - (-2) = 6; vertical length 4 - (-2) = 6; area = 6 × 6.

3. 27/4 cm³
Reasoning B = 3/2 × 3/2 = 9/4 cm²; V = B × 3 = 27/4 cm³.

4. 27/2 cm³
Reasoning B = 3 × 3 = 9 cm²; V = B × 3/2 = 27/2 cm³.

5. 144 cubes; each 1/27 cubic unit; prism 16/3 cubic units
Reasoning Counts along edges: 4, 6, 6. Product 144; 144 × 1/27 = 16/3, also lwh.