Statistics and Data Displays

Quiz 2

Standards 6.G.A.2, 6.SP.A.3, 6.SP.B.5c, 6.SP.B.5d, 6.SP.B.4

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 8; 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 sorting before finding medians, quartile conventions, counting every observation once, and mean versus variability.

Name _____ Date _____

Statistics and Data Displays

Quiz 2

Standards assessed 6.G.A.2, 6.SP.A.3, 6.SP.B.5c, 6.SP.B.5d, 6.SP.B.4

Questions 1–1 review Unit 8 (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] Fill a prism 5/2 × 3/2 × 3/2 units with cubes of edge 1/2 unit. How many cubes fit? Use their volumes to verify lwh.

2. [Current unit] Reading times in minutes are 6, 9, 9, 12, 12, 15. Find Q1, Q3, IQR, and range.

3. [Current unit] Reading times in minutes are 5, 7, 7, 9, 9, 11. Calculate the mean and MAD. Show all absolute deviations.

4. [Current unit] Reading times in minutes are 7, 8, 8, 9, 10, 19. Choose a center and matching variability measure. Calculate both and justify your choice.

5. [Current unit] Reading times in minutes are 5, 6, 6, 7, 8, 17. Draw a labeled dot plot. Describe a cluster or gap and report the count.

Quiz 2

Statistics and Data Displays

1. 45 cubes; each 1/8 cubic unit; prism 45/8 cubic units
Reasoning Counts along edges: 5, 3, 3. Product 45; 45 × 1/8 = 45/8, also lwh.

2. Q1 9, Q3 12; IQR 3 min; range 9 min
Reasoning Lower half [6, 9, 9] has median 9; upper half [12, 12, 15] has median 12. Subtract Q1 from Q3.

3. Mean 8 min; MAD 5/3 min
Reasoning Distances: 3, 1, 1, 1, 1, 3; sum 10; divide by 6 = 5/3.

4. Median 17/2 min and IQR 2 min; high value makes these resistant measures useful
Reasoning Mean = 61/6, median = 17/2, IQR = 10 - 8 = 2, MAD = 53/18. Accept another justified choice tied to shape and purpose.

5. 5: 1 dot; 6: 2 dots; 7: 1 dot; 8: 1 dot; 17: 1 dot; n = 6; low cluster and high isolated value
Reasoning Each observation contributes one dot; stack repeated values at their number-line position.