Statistics and Data Displays

Quiz 1

Standards 6.G.A.1, 6.SP.A.1, 6.SP.A.2, 6.SP.A.3, 6.SP.B.5a, 6.SP.B.5b, 6.SP.B.5c

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 _____

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Standards assessed 6.G.A.1, 6.SP.A.1, 6.SP.A.2, 6.SP.A.3, 6.SP.B.5a, 6.SP.B.5b, 6.SP.B.5c

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] Sketch a triangle with base 14 cm and perpendicular height 5 cm. Find its area.

2. [Current unit] Identify the group, attribute, and units in: How many minutes do students in our class sleep each night?

3. [Current unit] Reading times in minutes are 4, 7, 7, 10, 10, 13. Describe a typical value, range, shape, and any striking value.

4. [Current unit] Reading times in minutes are 7, 8, 8, 9, 10, 19. Report n, units, and mean. If one more student reads 11 minutes, find the new mean.

5. [Current unit] Reading times in minutes are 7, 8, 8, 9, 10, 19. Find the median and mean. Explain the difference in this set.

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1. 35 cm²
Reasoning A = bh/2 = 14 × 5 ÷ 2 = 35. Two such triangles make a parallelogram.

2. Group: class; attribute: sleep duration; units: minutes.
Reasoning Look for a collection of data and anticipated variation; identify the population and variable.

3. Center near 17/2 min; range 9 min; roughly symmetric; no isolated extreme
Reasoning The values balance around the middle. Range = 13 - 4.

4. n = 6; minutes; mean 61/6 min; new mean 72/7 min
Reasoning Sum = 61; mean = 61 ÷ 6 = 61/6. New sum = 72; divide by 7.

5. Median 17/2 min; mean 61/6 min; the high value pulls the mean upward
Reasoning 6 ordered values: average positions 3 and 4: (8 + 9) ÷ 2 = 17/2.