

Grade 4 · Lines, Angles, Shapes and Symmetry

· Test Answer Key

Common Core 4.G.A.1, 4.G.A.2, 4.G.A.3 · mathovore.fr

This answer key gives a worked solution and a scoring guide for each of the 9 test questions. Award points exactly as listed, and give partial credit where the guide allows it. The total is 20 points, so a score of 16 or more shows strong understanding.

Grade 4 Common Core: 4.G.A.1 · 4.G.A.2 · 4.G.A.3

Question 1: Lines, rays and segments (2 points)

- a. Figure X has one endpoint and an arrow, so X is a **ray**. Figure Y has two endpoints, so Y is a **line segment**.
- b. Figure Z is a line. It has no endpoints and goes on forever in both directions, so it has no end-to-end length.

Scoring: 1 point for naming both figures correctly; 1 point for saying it has no endpoints or goes on forever.

Question 2: Classify the angles (2 points)

- a. Angle 1 is smaller than a square corner: **acute**. Angle 2 has a square corner: **right**.
- b. Angle 3 is wider than a square corner but not straight: **obtuse**.

Scoring: 1 point if both parts of (a) are right; 1 point for (b).

Question 3: Three lines (2 points)

- a. Lines **l** and **m** never meet and stay the same distance apart.
- b. Line **n** crosses l and m at square corners.

Scoring: 1 point for each correct answer.

Question 4: Types of triangles (3 points)

- a. X has one angle wider than a square corner: **obtuse**.
- b. Y has a square corner: **right**.
- c. Z has three angles smaller than a square corner: **acute**.

Scoring: 1 point for each correct type.

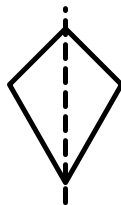
Question 5: Quadrilaterals (2 points)

- a. P has **2 pairs** of parallel sides and **0 right angles**.
- b. Q has **1 pair** of parallel sides (top and bottom) and **2 right angles**.

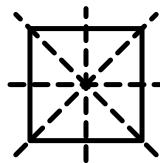
Scoring: for each figure, 1 point if both numbers are right; no point if one is wrong.

Question 6: Counting symmetry (3 points)

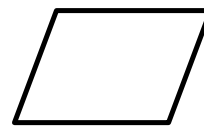
- a. The kite folds down its long diagonal: **1**.
- b. The square: **4**.
- c. The parallelogram: **0**.



1 line



4 lines



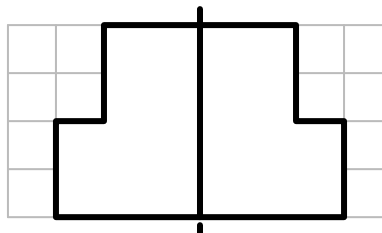
0 lines

Dashed lines of symmetry.

Scoring: 1 point for each correct count.

Question 7: Complete the figure (2 points)

Each corner on the left is as far from the dashed line as its partner on the right. The left half is 3 squares wide at the bottom and 2 squares wide at the top, 4 squares tall.



The finished figure (left half is the new part).

Scoring: 1 point for the correct left side corners; 1 point for a complete figure with matching heights.

Question 8: Find the mistake (2 points)

- a. A rectangle that is not a square has only **2** lines of symmetry: one lengthwise and one

crosswise. Folding corner to corner does not match.

- b. A ray has one endpoint and goes on forever, so it has **no length**. Only a line segment has a length.

Scoring: 1 point for each statement corrected.

Question 9: Maya's triangle (2 points)

No. A triangle with one right angle is a **right triangle**. An obtuse triangle has an angle wider than a square corner.

Scoring: 1 point for saying she is not correct; 1 point for naming the triangle as a right triangle with a reason.

Total
20 points