Directions: Answer the following question(s).

1 Which of these are ordered pairs?

A. 4, 9 and 5, 2

B. (4, 9 and 5, 2)

C. (4, 9) and (5, 2)

D. (4 9) and (5 2)

Master ID: 3278939 Revision: 1

Correct: C

Rationale:
  A. Student(s) may have forgotten to use parentheses.
  B. Student(s) may have thought that both sets of pairs should be contained within the same parentheses.
  C. Correct answer
  D. Student(s) may have thought there was no need to use commas within the parentheses.

Rubric: 1 Point(s)

Standards:
   CCSS.Math.Content.5.G.A.1

2 What are the y-coordinates for the ordered pairs (5, 9) and (7, 3)?

A. 5 and 3

B. 9 and 3

C. 9 and 7

D. 5 and 7

Master ID: 3278943 Revision: 1

Correct: B

Rationale:
  A. Student(s) may have confused the x- and y-coordinate for the first pair.
  B. Correct answer
  C. Student(s) may have confused the y-coordinate for the second pair.
  D. Student(s) may have confused x- and y-coordinates.

Rubric: 1 Point(s)

Standards:
   CCSS.Math.Content.5.G.A.1

3 Which of the following represents Point S on the graph shown below?
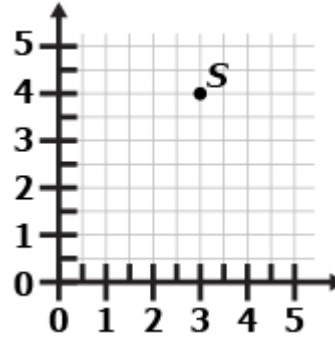
A. (0, 3)

B. (4, 0)

C. (3, 4)

D. (4, 3)

Master ID: 3286031 Revision: 1

Correct: C

Rationale:
  A. Student(s) may not have understood how to read ordered pairs on a graph and guessed.
  B. Student(s) may not have understood how to read ordered pairs on a graph and guessed.
  C. Correct answer
  D. Student(s) may have confused the x and y axes, switching the two values.

Rubric: 1 Point(s)

Standards:
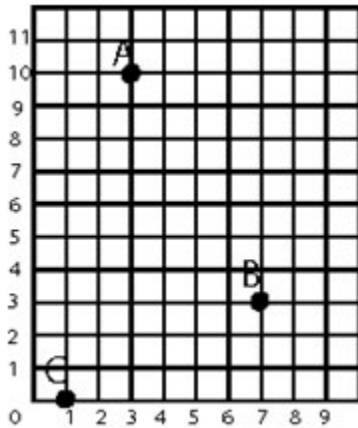   CCSS.Math.Content.5.G.A.1

Directions: Read the passage below and answer the question(s) that follow.

Grid Plots Graph
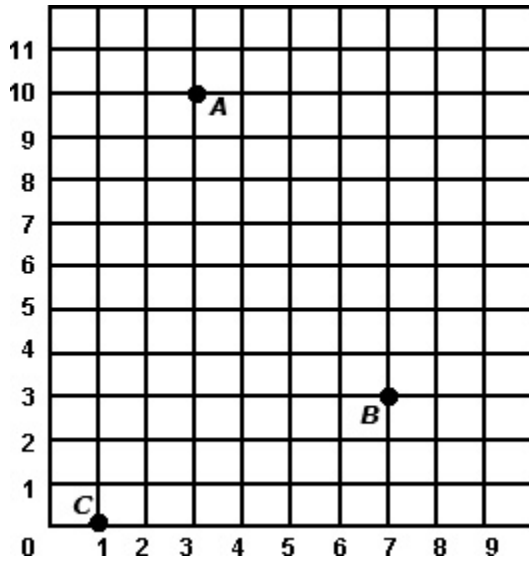
Directions: Read the passage below and answer the question(s) that follow.

4 What is the correct way to write the ordered pair for point C?

A. (0, 0)

B. (0, 1)

C. (1, 0)

D. (1, 1)

Master ID: 3275280 Revision: 1

Correct: **C**

Rationale:

A. Student(s) may have used the correct coordinate for the *y* but may not have moved over 1 for the *x*–coordinate.

B. Student(s) may have reversed the order of the *x*– and *y*–coordinates.

C. Correct answer

D. Student(s) may have used the correct order but may have chosen the *y*–coordinate where the C (label) is rather than where the point is.
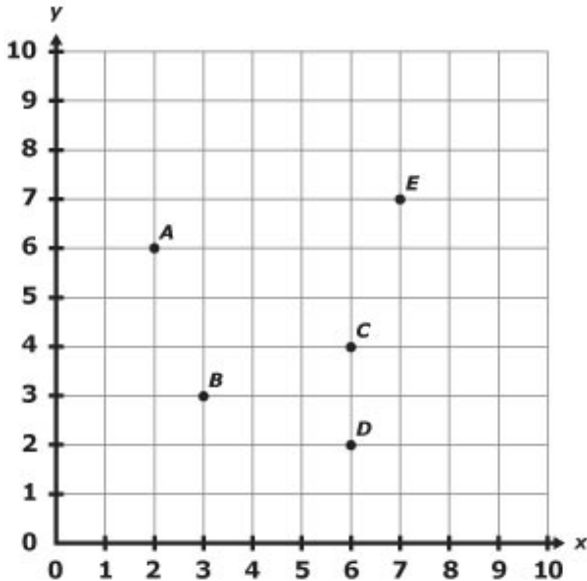
Rubric: 1 Point(s)

Standards:

        CCSS.Math.Content.5.G.A.1

Directions: Answer the following question(s).

| 5 | What point is located at $(6,2)$? |

A.   A

B.   B

C.   C

D.   D

Master ID: 3274075 Revision: 1

Correct: **D**

Rationale:

A.   Student(s) may have confused the *x*- and *y*-coordinates and assumed that this was the correct answer.

B.   Student(s) may have been unfamiliar with how to plot points and assumed that this was the best answer.

C.   Student(s) may not have carefully read the grid and assumed that this was correct because Point C is on coordinate 6.

D.   Correct answer

Rubric: 1 Point(s)

Standards:

      CCSS.Math.Content.5.G.A.1

| 6 | The table below shows the number of inches tall Claudia was every year from when she was born to when she turned five. |

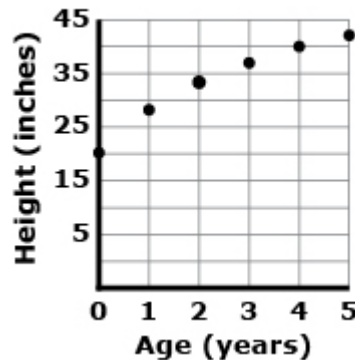| Age	Inches Tall
0	20
1	29
2	34
3	37
4	40
5	42

Which graph correctly displays this data?
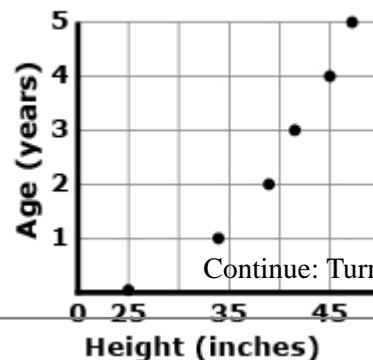
A.   **Claudia's First Five Years**
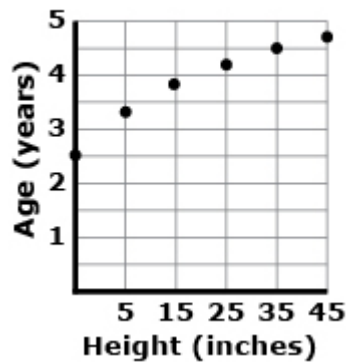
B.   **Claudia's First Five Years**

C.   **Claudia's First Five Years**

D.   **Claudia's First Five Years**

Continue: Turn to the next page.

Directions: Answer the following question(s).

Master ID: 3290920 Revision: 1

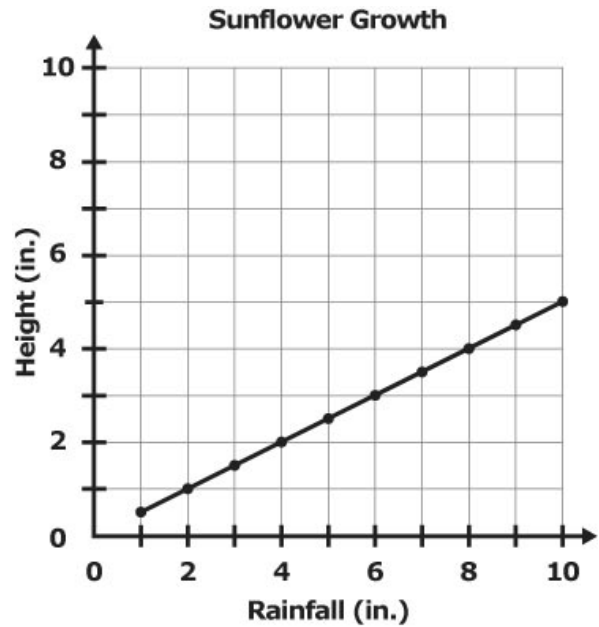Correct: **B**

Rationale:
- A.   Student(s) labeled the axes incorrectly.
- B.   Correct answer
- C.   Student(s) mixed up the dependent and independent variables and plotted accordingly. Student(s) also started the x-axis at 20 instead of 0, and plotted all of the heights 5 inches too tall.
- D.   Student(s) plotted all of the heights 5 inches too tall. Student(s) also started the y-axis at 25 instead of 0.

Rubric: 1 Point(s)

Standards:
    CCSS.Math.Content.5.G.A.2

7 This graph shows the relationship between the amount of rainfall and the growth of the sunflowers.


Sunflower Growth

According to this data, how much does it have to rain to get a 5 in. tall sunflower?

- A.   2.5"
- B.   5"
- C.   9"
- D.   10"

Directions: Answer the following question(s).

Master ID: 3273479 Revision: 1

Correct: **D**

Rationale:

A.   Student(s) may have referred to the wrong axis. Student(s) may have looked at 5 on the *x* axis instead of the *y* axis.

B.   Student(s) may not have understood how to get the information from the graph. Student(s) may have guessed and thought that the amount of rainfall was equal to the height of the sunflower.

C.   Student(s) may have found the 5 on the *y* axis but not followed it across accurately and thought that it corresponded to the point at 9 on the *x* axis.

D.   Correct answer

Rubric: 1 Point(s)

Standards:

CCSS.Math.Content.5.G.A.2

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8 This graph shows the relationship between a worm's age and its length.

Worm Size
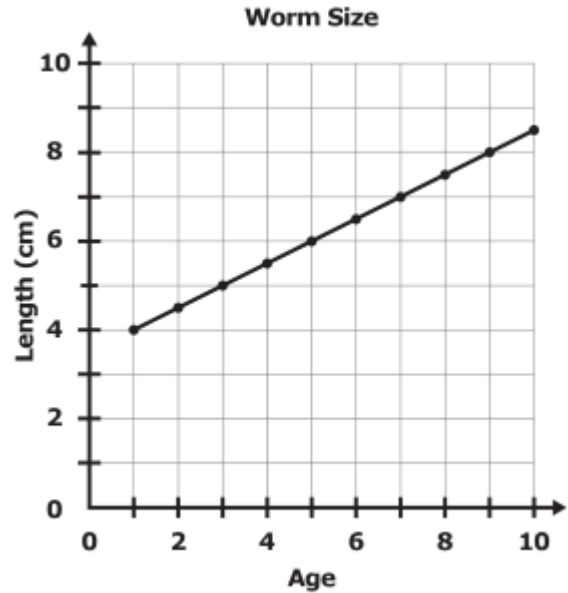
Based on the graph, at what age is the worm's length equal to its age?

A.   5

B.   6

C.   7

D.   8

Master ID: 3273499 Revision: 1

Correct: **C**

Rationale:

A.   Student(s) may not have been able to determine the correct answer. Student(s) may have chosen the age and length that is in the middle of the range on the *x* and *y* axis.

B.   Student(s) may have misread the graph. Student(s) may not have followed the graph lines straight and thought that the 6 and the 6 met at a point. They are only .5 off.

C.   Correct answer

D.   Student(s) may have misread the graph. Student(s) may not have followed the graph lines straight and thought that the 8 and the 8 met at a point. They are only .5 off.

Rubric: 1 Point(s)

Standards:

CCSS.Math.Content.5.G.A.2

Directions: Answer the following question(s).

9 | Jenny wants to know about how far apart the objects in her room are to one another, so she created a map using the coordinate plane below. Each line segment of her graph represents 1 foot, and Jenny will only use the lines to determine the distances.

Which of the following statements about Jenny's map are correct? Select *two* that apply.
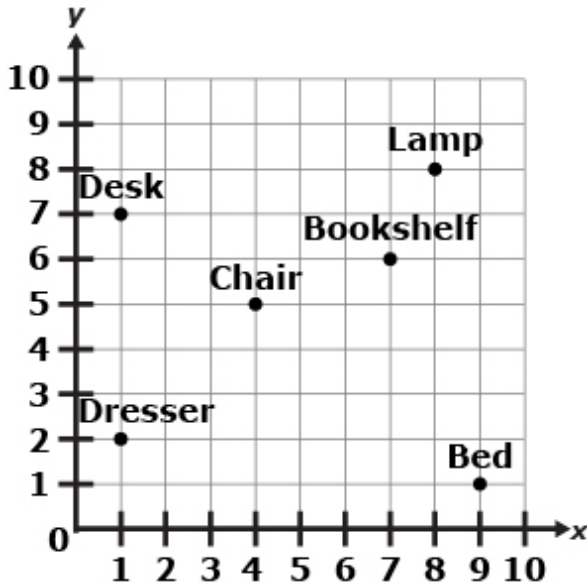

A.   The shortest distance between the dresser and bed is closer than the shortest distance between the bed and the lamp.

B.   The shortest distance between the bookshelf and desk is 8 feet.

C.   If Jenny is sitting in her chair, she is closer to the dresser than she is to the lamp.

D.   The distance from her desk to her chair is 5 feet.

Master ID: 3231092 Revision: 1

Correct: CD

Rationale:

A.   Student(s) may have miscalculated the distances.

B.   Student(s) may have incorrectly counted the number of feet.

C.   Correct answer

D.   Correct answer

Rubric: 1 Point(s)

Standards:
    CCSS.Math.Content.5.G.A.2

10 | The mayor of Menville was keeping track of the population growth over a four year period. The following graph shows the results.

Population Growth
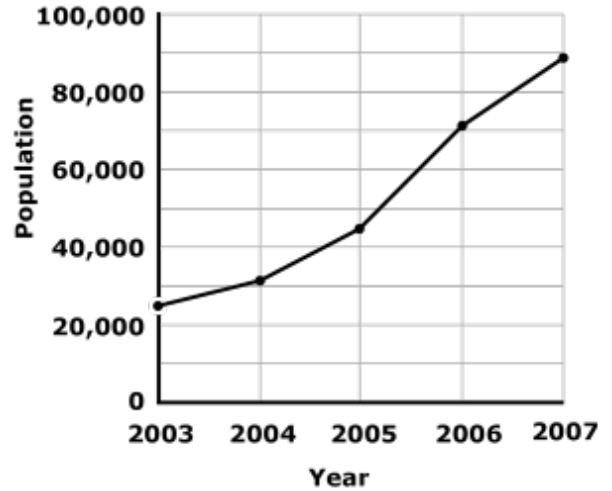
During which time period did the population of Menville grow the MOST?

A.   2003-2004

B.   2004-2005

C.   2005-2006

D.   2006-2007

Master ID: 3228957 Revision: 1

Correct: C

Rationale:

A.   Student(s) may have chosen the year that had the least growth in population.

B.   Student(s) may not have realized that the population growth of 2004 was less than the population growth of 2005.

C.   Correct answer

D.   Student(s) may have thought that 2006 experienced the most growth because there was a significant jump from 2005-2006, but not from 2006-2007.

Rubric: 1 Point(s)

Standards:
    CCSS.Math.Content.5.G.A.2

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Page 7

Directions: Answer the following question(s).

11 Mrs. Seymour wants her students to draw a shape with all of these properties:

- four sides
- opposite sides are the same length
- opposite sides are parallel
- opposite angles are equal

The only instructions Mrs. Seymour gives her students, though, is to draw a shape of a certain kind. Which kind of shape should she NOT ask her students to draw if she wants to make sure each shape has all four of the properties listed?

A. square

B. trapezoid

C. rhombus

D. rectangle

Master ID: 3702836 Revision: 1
Correct: B
Rationale:
  A. All squares have all four of the listed properties, so asking her students to draw a square should work.
  B. Not all trapezoids have opposite sides that are the same length or opposite angles that are equal. Mrs. Seymour can't be sure all of her students will draw a shape with the four properties if she asks them to draw a trapezoid.
  C. All rhombuses have all four of the listed properties, so asking her students to draw a rhombus should work.
  D. All rectangles have all four of the listed properties, so asking her students to draw a rectangle should work.
Rubric: 1 Point(s)
Standards:
      CCSS.Math.Content.5.G.B.3

12 All rectangles have four sides, two pairs of parallel sides, and all right angles. All shapes of what kind share these properties with rectangles?

A. trapezoid

B. square

C. parallelogram

D. rhombus

Master ID: 3667546 Revision: 1
Correct: B
Rationale:
  A. A trapezoid with one pair of parallel sides does not have these properties of rectangles.
  B. Squares are a subcategory of rectangles (rectangles with all sides the same length), so all squares have the properties of rectangles.
  C. A parallelogram with acute and obtuse angles does not have these properties of rectangles.
  D. A rhombus that does not have right angles does not have these properties of rectangles.
Rubric: 1 Point(s)
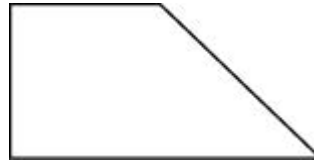Standards:
      CCSS.Math.Content.5.G.B.3

Directions: Answer the following question(s).

13 Shana is making a design using quadrilaterals. She wants to use quadrilaterals that each have two pairs of parallel sides and four right angles. Which two shapes can she use?

A. any rectangle and any trapezoid

B. any square and any parallelogram

C. any rectangle and any square

D. any triangle and any parallelogram

Master ID: 3658293 Revision: 1

Correct: **C**

Rationale:
  A.   All trapezoids are quadrilaterals, but they may have only one pair of parallel sides.
  B.   All parallelograms are quadrilaterals with two pairs of parallel sides, but not all have right angles.
  C.   All squares and rectangles are quadrilaterals that have two pairs of parallel sides and four right angles.
  D.   All triangles are not quadrilaterals because they have 3 sides instead of 4 sides. All parallelograms are quadrilaterals with two pairs of parallel sides, but not all have right angles.

Rubric: 1 Point(s)

Standards:
      CCSS.Math.Content.5.G.B.3

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14 Josh drew the following shape.

Which statement about this shape is true?

A. Because it is a trapezoid, it is also a parallelogram.

B. Because it is a parallelogram, it is also a trapezoid.

C. Because it is a quadrilateral, it is also a trapezoid.

D. Because it is a trapezoid, it is also a quadrilateral.

Master ID: 3650147 Revision: 1

Correct: **D**

Rationale:
  A.   It is not true that all trapezoids are parallelograms. This shape has only one pair of parallel sides, but a parallelogram must have two pairs of parallel sides.
  B.   The shape is not a parallelogram because it has only one pair of parallel sides.
  C.   It is true that the shape is both a quadrilateral and a trapezoid. However, it is not a trapezoid because it is a quadrilateral. Not all quadrilaterals are trapezoids.
  D.   Trapezoids are a subcategory of quadrilaterals, so any trapezoid is also a quadrilateral.

Rubric: 1 Point(s)

Standards:
      CCSS.Math.Content.5.G.B.3

Directions: Answer the following question(s).

15 Mr. Spence asks his math students to identify two kinds of shapes using the clues below.

- Each shape must have all sides of equal length.
- Each shape must have 4 sides.
- Each shape must have two pairs of parallel sides.

Which two kinds of shapes can Mr. Spence be describing?

A.   squares, parallelograms

B.   rhombuses, rectangles

C.   squares, rhombuses

D.   rectangles, trapezoids

Master ID: 3650146 Revision: 1

Correct: **C**

Rationale:
- A.   Parallelograms do not have to have all sides of equal length.
- B.   Rectangles do not have to have all sides of equal length.
- C.   Both these shapes must have all the listed attributes.
- D.   Neither rectangles nor trapezoids must have all sides of equal length. Also, trapezoids do not have to have two pairs of parallel sides.

Rubric: 1 Point(s)

Standards:
    CCSS.Math.Content.5.G.B.3

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16 Which of the following figures prove this statement is *false*?

"Polygons are any closed figures."

Select the *two* figures that *best* apply.

A.

B.

C.

D.

Master ID: 3231797 Revision: 1

Correct: **BC**

Rationale:
- A.   Student(s) may have mistaken a triangle as a figure other than a polygon.
- B.   Correct answer
- C.   Correct answer
- D.   Student(s) may have been unfamiliar with the properties of polygons.

Rubric: 1 Point(s)

Standards:
    CCSS.Math.Content.5.G.B.4

Directions: Answer the following question(s).

17   Oliver made the following statement:

"A rhombus is a parallelogram. Therefore, a rhombus is also a _____."

What word should be placed in the blank to make Oliver's statement true?

A.   square

B.   rectangle

C.   quadrilateral

D.   right trapezoid

Master ID: 3711143 Revision: 1

Correct: **C**

Rationale:
  A.   A rhombus is not necessarily a square because it may not have four right angles.
  B.   A rhombus is not necessarily a rectangle because it may not have four right angles.
  C.   A rhombus is quadrilateral because all parallelograms are quadrilaterals.
  D.   A rhombus is not necessarily a right trapezoid because it may not have right angles.

Rubric: 1 Point(s)

Standards:
     CCSS.Math.Content.5.G.B.4

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18   Look at the shape below.

Choose the TWO names that can be used to describe the shape shown.

A.   square

B.   rectangle

C.   kite

D.   parallelogram

E.   quadrilateral

Master ID: 3619667 Revision: 1

Correct: **DE**

Rationale:
  A.   This is the result of not recognizing that a square has four right angles and equal side lengths, which the given shape does not have.
  B.   This is the result of not recognizing that a rectangle has four right angles, which the given shape does not have.
  C.   This is the result of not recognizing that a kite has two pairs of equal-length sides that are adjacent to each other, which the given shape does not have.
  D.   A parallelogram has four sides and two pair of parallel sides, as does the given shape.
  E.   A quadrilateral is defined as a shape with four sides, and the given shape has four sides.

Rubric: 1 Point(s)

Standards:
     CCSS.Math.Content.5.G.B.4

Directions: Answer the following question(s).

19 Which of these shapes can be classified as a polygon, quadrilateral, and a parallelogram?

A. trapezoid

B. rhombus

C. triangle

D. pentagon

Master ID: 3247392 Revision: 1

Correct: **B**

Rationale:

A. Student(s) may have known that a trapezoid could be classified as a polygon and a quadrilateral. Student(s) may not have realized that a trapezoid was not a type of parallelogram.

B. Correct answer

C. Student(s) may have known that a triangle was a type of polygon, but may not have checked to see if it could have been classified as a quadrilateral or a parallelogram.

D. Student(s) may have known that is was a type of polygon. Student(s) may not have known the other properties of a pentagon and chose this option.

Rubric: 1 Point(s)

Standards:

CCSS.Math.Content.5.G.B.4

20 Look at the hierarchy below. Which figure can be placed below the rectangle in this hierarchy?
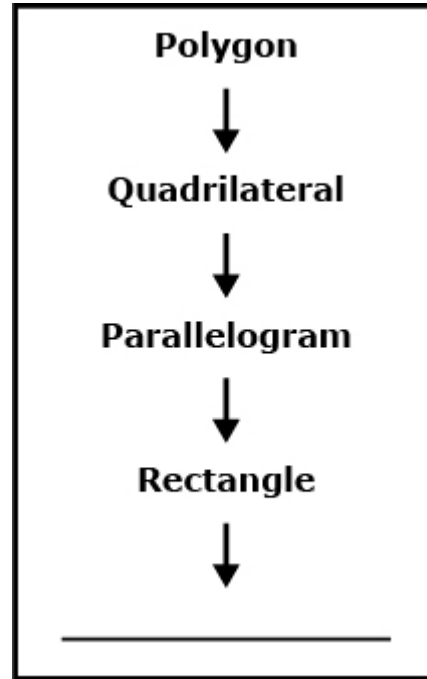
A. rhombus

B. trapezoid

C. square

D. triangle

Master ID: 3247315 Revision: 1

Correct: **C**

Rationale:

A. Student(s) may have chosen this option because a rhombus could be classified as a polygon, quadrilateral, and a parallelogram. Student(s) may have ignored the word rectangle in the hierarchy.

B. Student(s) may have chosen this option because a trapezoid was a type of polygon and quadrilateral. Student(s) may have ignored the other figures in the hierarchy.

C. Correct answer

D. Student(s) may have known that a triangle was a type of polygon but may not have looked to see if it could be classified as the other figures in this hierarchy.

Rubric: 1 Point(s)

Standards:

CCSS.Math.Content.5.G.B.4