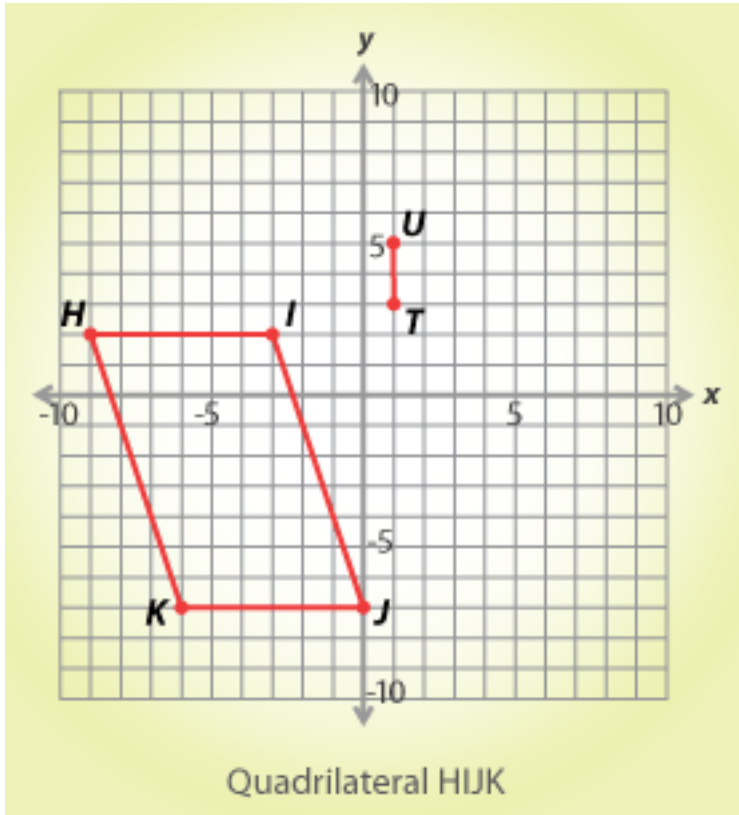


Directions: Please choose the best answer choice for each of the following questions.

1. Quadrilateral $TUVW$ is similar to quadrilateral $HIJK$. Which of the following could be possible coordinates for point W ?



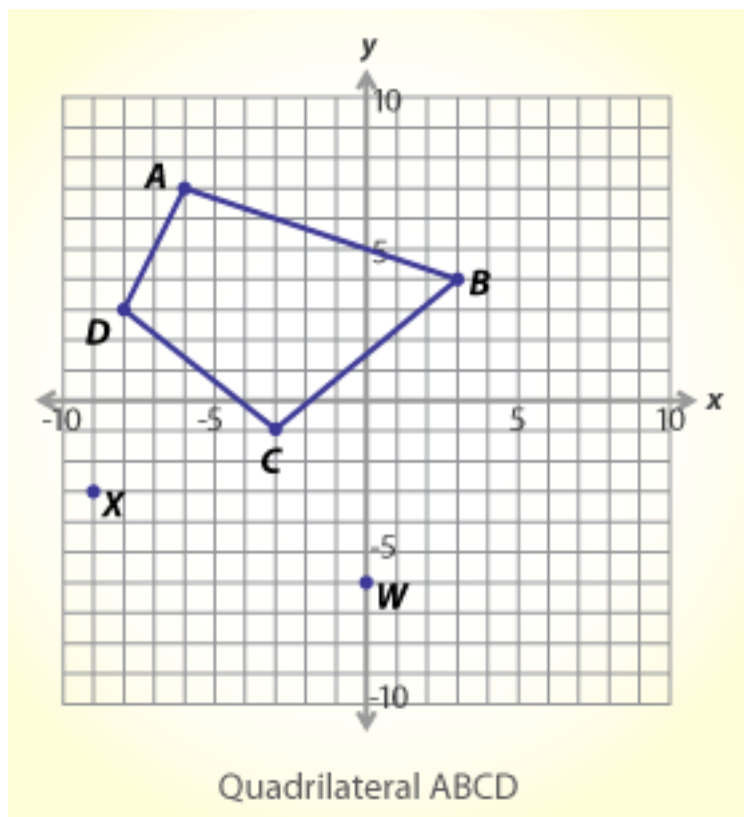
- A. (2, 6)
- B. (0, 6)
- C. (7, 5)
- D. (4, 4)

Answer Choice Rationale

- A. No rationale available
- B. No rationale available
- C. No rationale available
- D. Correct

ItemID saltsmad.2837
 Correct D
 Standard(s) MA.9-12.MA.912.G.3.3

2. Quadrilateral $WXYZ$ is congruent to quadrilateral $ABCD$. Which of the following could be possible coordinates for point Y ?



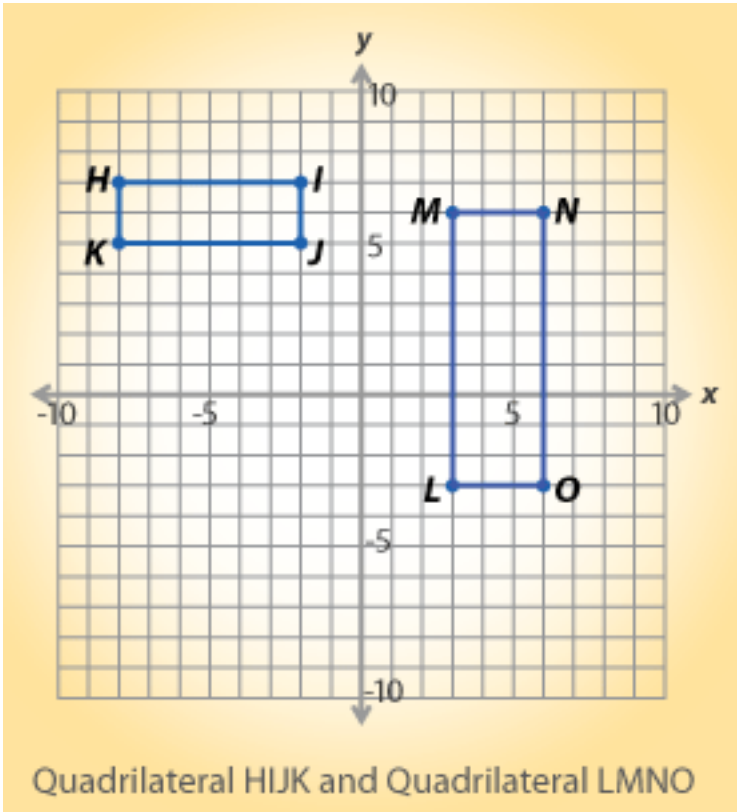
- A. $(-6, -1)$
- B. $(-3, -8)$
- C. $(-3, 2)$
- D. $(-6, -11)$

Answer Choice Rationale

- A. No rationale available
- B. No rationale available
- C. Correct
- D. No rationale available

ItemID saltsmad.2836
 Correct C
 Standard(s) MA.9-12.MA.912.G.3.3

3. Are quadrilateral $HIJK$ and quadrilateral $LMNO$ similar quadrilaterals?



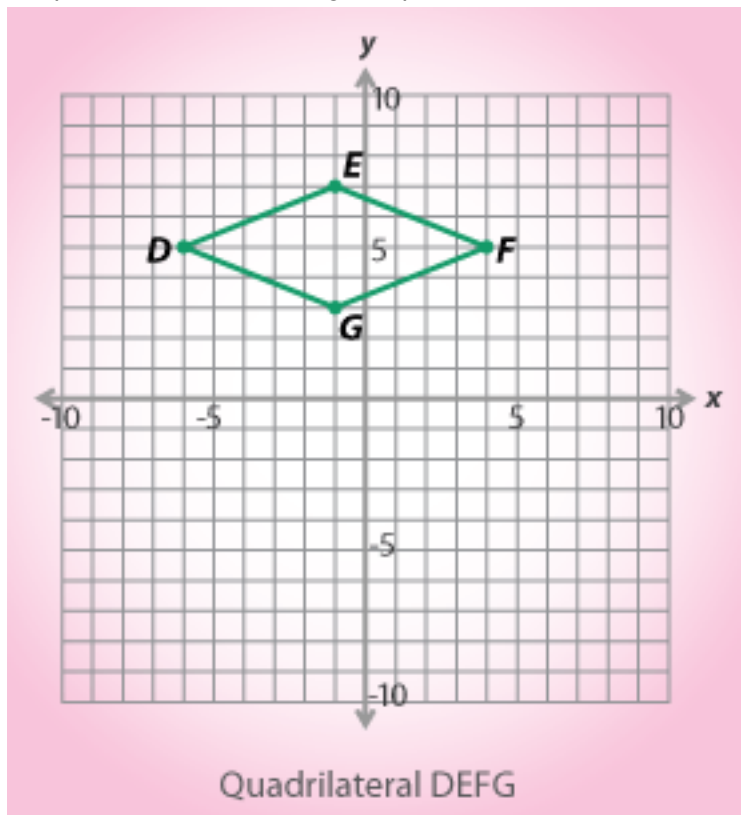
- A. No, although the corresponding angles are congruent, quadrilateral $LMNO$ is not a reflection of quadrilateral $HIJK$.
- B. Yes, because corresponding angles are congruent and corresponding sides have the same scale factor.
- C. No, although the corresponding angles are congruent, the rectangles are not the same size.
- D. Yes, because they are both rectangles.

Answer Choice Rationale

- A. No rationale available
- B. Correct
- C. No rationale available
- D. No rationale available

ItemID saltsmad.2838
 Correct B
 Standard(s) MA.9-12.MA.912.G.3.3

4. Which of the following arguments correctly answers and justifies the question:
"Is quadrilateral $DEFG$ a regular quadrilateral?"



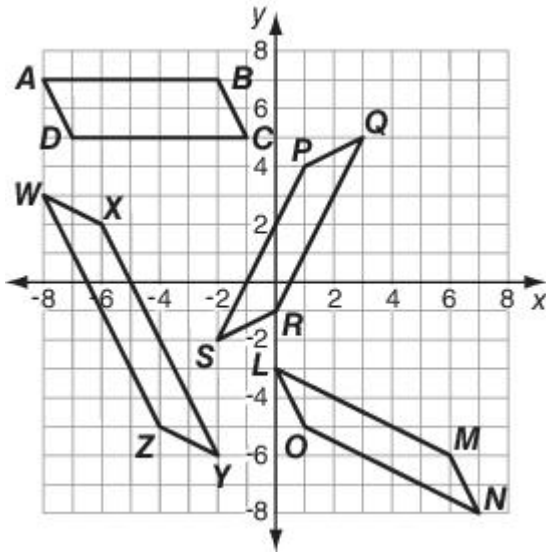
- A. No, it is not a regular quadrilateral because the diagonals are not the same length
- B. No, it is not a regular quadrilateral because opposite sides are parallel.
- C. Yes it is a regular quadrilateral because all sides are the same length.
- D. Yes, it is a regular quadrilateral because the diagonals are perpendicular.

Answer Choice Rationale

- A. Correct
- B. No rationale available
- C. No rationale available
- D. No rationale available

ItemID saltsmad.2839
 Correct A
 Standard(s) MA.9-12.MA.912.G.3.3

5. Ben drew four quadrilaterals, shown on the coordinate plane below.



Which of the following are congruent?

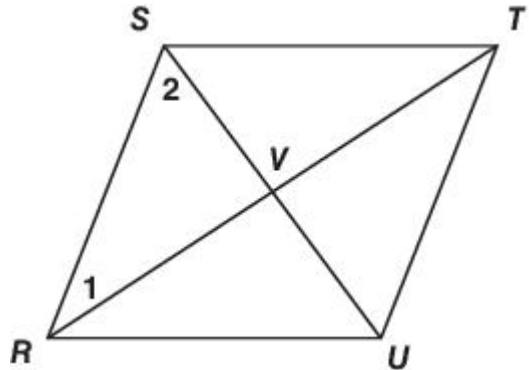
- A. $ABCD$ and $LMNO$
- B. $ABCD$ and $WXYZ$
- C. $LMNO$ and $PQRS$
- D. $WXYZ$ and $LMNO$

Answer Choice Rationale

- A. The sides are the same length, but the corresponding angles are not congruent. \overline{XY} is longer than the corresponding side, \overline{CD} .
- B. \overline{CD} . Also, the corresponding angles are not congruent.
- C. Correct answer
- D. \overline{XY} is longer than the corresponding side, \overline{ON} .

ItemID A2K.1077917
 Correct C
 Standard(s) MA.9-12.MA.912.G.3.3

6. Richie was given the following statements and corresponding reasons and was asked to put them together in the right order to complete a proof.



Given: $RSTU$ is a rhombus.
 Prove: $\angle 1$ is complementary to $\angle 2$.

Statement	Reason
1. $m\angle SVR = 90^\circ$	Perpendicular lines form right angles.
2. $m\angle 1 + m\angle 2 = 90^\circ$	Subtraction property of equality
3. $RSTU$ is a rhombus.	Given
4. $\overline{RT} \perp \overline{SU}$	Diagonals of a rhombus are perpendicular.
5. $\angle 1$ is complementary to $\angle 2$.	If the sum of the measures of two angles is 90° , they are complementary.
6. $m\angle 1 + m\angle 2 + m\angle SVR = 180^\circ$	Sum of the angles of a triangle is 180° .

Which is the correct order of these statements and reasons?

- A. 3, 4, 1, 6, 2, 5
- B. 3, 4, 2, 6, 1, 5
- C. 5, 4, 3, 1, 6, 2
- D. 3, 1, 4, 2, 5, 6

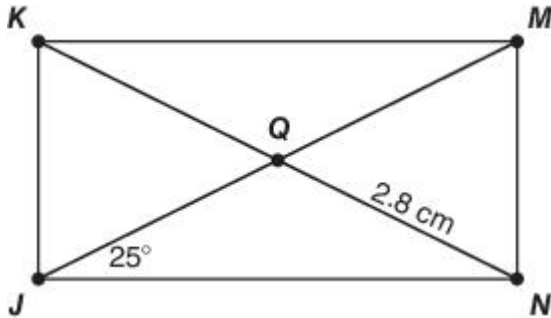
Answer Choice Rationale

- A. Correct answer
 The first two statements and reasons are in the correct order, but the correct order of the last four statements and reasons is 2, 6, 1, 5.
- B. Number 5 is the last statement and reason not the first, and number 3 must go before number 4.
- C. The statements and reasons start with number 3, but the correct order of the remaining statements and reasons is 4, 1, 6, 2, 5.

ItemID A2K.1019848
 Correct A
 Standard(s) MA.9-12.MA.912.G.3.4

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7. As part of a warm-up problem, Cassie was told that in this parallelogram, $\overline{KN} \cong \overline{MJ}$ and the $m\angle MJN$ is 25° .



Which reason could Cassie give to justify that the $m\angle KJM$ is 65° ?

- A. If the diagonals are congruent, then the parallelogram is a rectangle.
- B. If the diagonals are congruent, then the diagonals are perpendicular.
- C. If the diagonals are congruent, then the parallelogram is a rhombus.
- D. If the diagonals are congruent, then each pair of vertical angles are congruent.

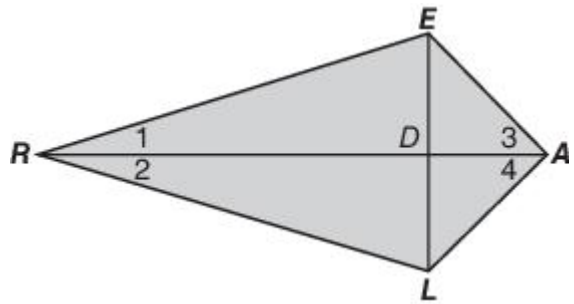
Answer Choice Rationale

- A. Correct answer.
- B. The diagonals do not have to be perpendicular if they are congruent.
This answer mistakes congruent diagonals as indicating that the parallelogram is a rhombus instead of a rectangle.
- C. To justify that the angle measures 65° , angle KJN must be shown to be a right angle.

ItemID A2K.1012080
 Correct A
 Standard(s) MA.9-12.MA.912.G.3.4

8. A student completed most of this proof.

Given: $\angle 1 \cong \angle 2$ and $\angle 3 \cong \angle 4$
 Prove: $\triangle REA \cong \triangle RLA$



Statement	Reason
$\angle 1 \cong \angle 2$	Given
$\overline{RA} \cong \overline{RA}$	Reflexive Property
$\angle 3 \cong \angle 4$	Given
?	Angle-Side-Angle Postulate

Which statement belongs in the space where the question mark is?

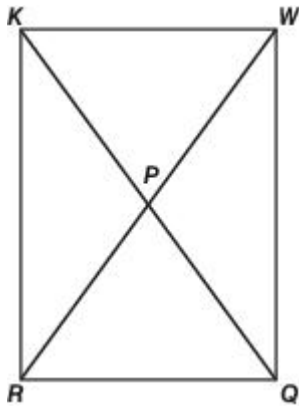
- A. $\triangle REA \cong \triangle RLA$
- B. $\triangle RED \cong \triangle RLD$
- C. $\triangle REA \cong \triangle RAL$
- D. $\triangle REL \cong \triangle ELA$

Answer Choice Rationale

- A. Rationale: uses wrong postulate
- B. Rationale: uses wrong postulate.
- C. Rationale: uses wrong triangles
- D. Rationale: uses wrong triangles and wrong postulate

ItemID A2K.1010194
 Correct A
 Standard(s) MA.9-12.MA.912.G.3.4

9. Mr. Cameron showed his class this quadrilateral.



Which set of conditions could Mr. Cameron's class use to prove that this quadrilateral is a parallelogram?

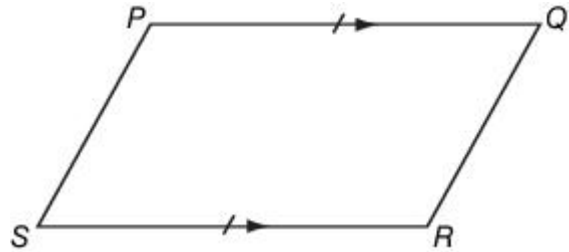
- A. $\overline{KW} \cong \overline{QR}$ and $\overline{KR} \parallel \overline{WR}$
- B. $\overline{KP} \cong \overline{QP}$ and $\overline{KQ} \cong \overline{WR}$
- C. $\angle KPW \cong \angle QPR$ and $\angle KPR \cong \angle QPW$
- D. $\angle KRQ \cong \angle QWK$ and $\angle RKW \cong \angle WQR$

Answer Choice Rationale

- A. \overline{KR} and \overline{WR} intersect at point R. It is a parallelogram because $\angle KRQ \cong \angle QWK$ and $\angle RKW \cong \angle WQR$. That is, the opposite angles are congruent.
These conditions do not tell us whether this quadrilateral is a parallelogram. It is a
- B. parallelogram because $\angle KRQ \cong \angle QWK$ and $\angle RKW \cong \angle WQR$. That is, the opposite angles are congruent.
These pairs of angles are congruent because they are vertical angles. These conditions do not tell us whether this quadrilateral is a
- C. parallelogram. It is a parallelogram because $\angle KRQ \cong \angle QWK$ and $\angle RKW \cong \angle WQR$. That is, the opposite angles are congruent.
- D. Correct answer.

ItemID A2K.1013249
 Correct D
 Standard(s) MA.9-12.MA.912.G.3.4

10. Below this quadrilateral are three statements about the figure.



- I. $\angle P \cong \angle Q$
- II. $\angle P \cong \angle R$
- III. $\overline{PR} \cong \overline{QS}$

Which statement can be proven?

- A. I only
- B. II only
- C. I and II
- D. II and III

Answer Choice Rationale

- A. This answer mistakes statement I as being able to be proven and does not recognize that statement II can be proven.
- B. Correct answer.
- C. Statement II can be proven, but statement I cannot.
- D. Statement II can be proven, but statement III cannot.

ItemID A2K.1020019
 Correct B
 Standard(s) MA.9-12.MA.912.G.3.4

Stop! You have finished this exam.