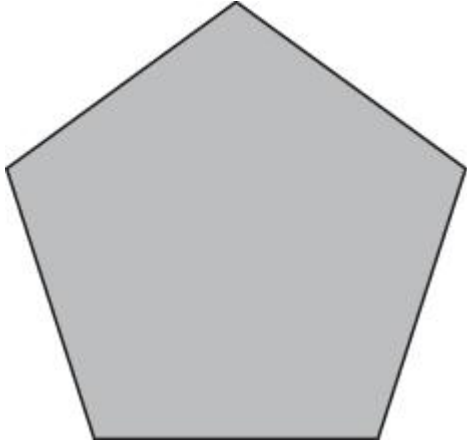


Directions: Please choose the best answer choice for each of the following questions.

1. What is the exterior angle measure of the shown regular polygon?



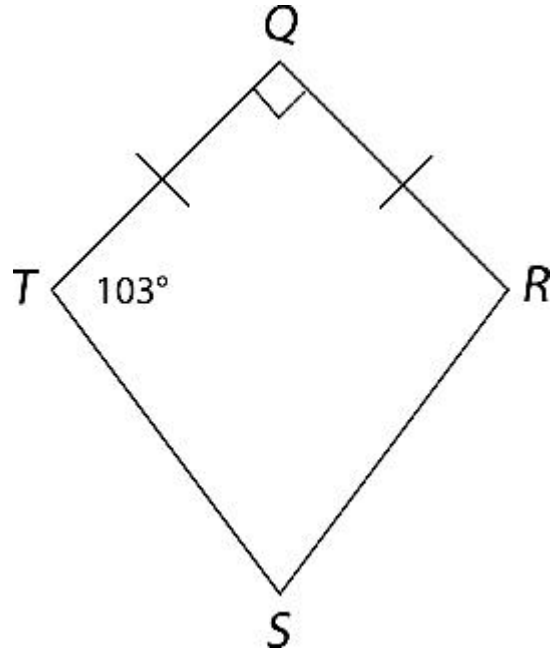
- A. 360 degrees
- B. 108 degrees
- C. 72 degrees
- D. 18 degrees

Answer Choice Rationale

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

ItemID A2KC.1105050
 Correct C
 Standard(s) MA.9-12.MA.912.G.2.2

2. What is the measure of $\angle S$ in the kite below?



- A. 64°
- B. 90°
- C. 103°
- D. 167°

Answer Choice Rationale

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

ItemID A2KC.1132332
 Correct A
 Standard(s) MA.9-12.MA.912.G.2.2

3. What is the sum of the interior angles of a regular octagon?
- A. 180°
 - B. 360°
 - C. $1,080^\circ$
 - D. $1,440^\circ$

Answer Choice Rationale

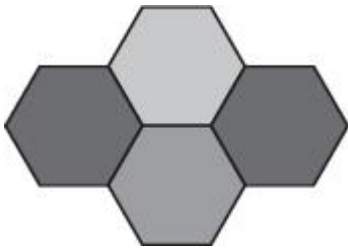
- A. This is the sum of the interior angles of a triangle.

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- B. This is the sum of the interior angles of a quadrilateral.
- C. Correct answer.
This is the sum of the interior angles of a regular decagon. This answer could be found by multiplying the number of sides of an octagon by 180° .
- D. This is the sum of the interior angles of a quadrilateral.

ItemID A2K.1014265
Correct C
Standard(s) MA.9-12.MA.912.G.2.2

4. The floor tiles in a restaurant are in the shape of regular hexagons.



What is the measure of each interior angle of a hexagonal tile?

- A. 60°
- B. 120°
- C. 360°
- D. 720°

Answer Choice Rationale

- This answer divides 360° by 6. This answer
- A. mistakes the sum of the angle measures as 360° instead of 720° .
- B. Correct answer.
This answer gives the sum of the angle measures, and mistakes the sum of the angle measures as 360° instead of 720° .
- C. This is the sum of the angle measures.
- D. This is the sum of the angle measures.

ItemID A2K.1010193
Correct B
Standard(s) MA.9-12.MA.912.G.2.2

5. If the exterior angle of a triangle measures 46 degrees, then what must be the sum of the two remote interior angles?
- A. 44 degrees
- B. 46 degrees
- C. 134 degrees
- D. 314 degrees

Answer Choice Rationale

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

ItemID A2KC.1113135
Correct B
Standard(s) MA.9-12.MA.912.G.2.2

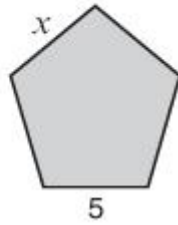
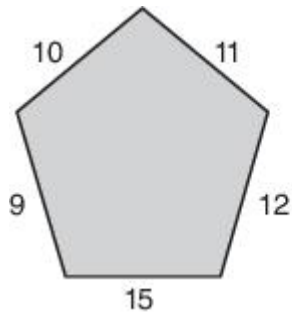
6. What is necessary in order to call two quadrilaterals congruent?
- A. Their sides must be equal in length.
- B. Their angles must be equal in size.
- C. Their sides must be equal in length and their angles must be equal in size.
- D. Their sides and angles must be proportional.

Answer Choice Rationale

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

ItemID A2KC.1107324
Correct C
Standard(s) MA.9-12.MA.912.G.2.3

7. The figures below are similar. Find the value of x in the second figure.



- A. 3
- B. $3\frac{1}{3}$
- C. $3\frac{2}{3}$
- D. 4

Answer Choice Rationale

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

ItemID A2KC.1107335
 Correct B
 Standard(s) MA.9-12.MA.912.G.2.3

8. This diagram shows a portion of a city street map.

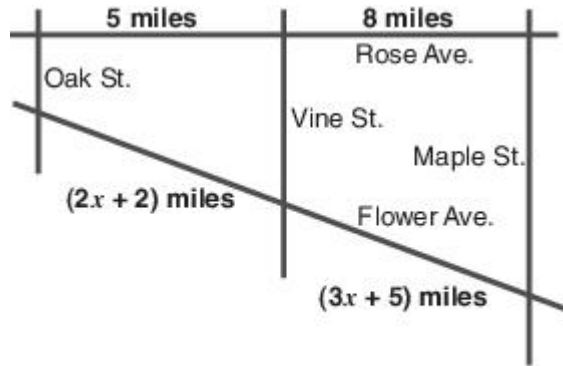


Diagram is not drawn to scale.

If Oak, Vine, and Maple Streets are parallel to each other, what is the value of x ?

- A. 7
- B. 9
- C. 20
- D. 22

Answer Choice Rationale

- A. This answer finds the value of x as 7 instead of 9.
- B. Correct answer.
- C. This is the length of the street from Oak Street to Vine Street. This answer finds the value of x correctly, but then substitutes it into $2x + 2$.
- D. This answer does not use simultaneous equations to find the value of x .

ItemID A2K.1114598
 Correct B
 Standard(s) MA.9-12.MA.912.G.2.3

9. Given: $\triangle ABC \cong \triangle DEF$ and $\triangle ABC \cong \triangle QRS$.

Which of the statements below is correct?

- A. $\overline{AB} \cong \overline{BC}$
- B. $\overline{BC} \cong \overline{QR}$
- C. $\overline{QS} \cong \overline{EF}$
- D. $\overline{DF} \cong \overline{QS}$

Answer Choice Rationale

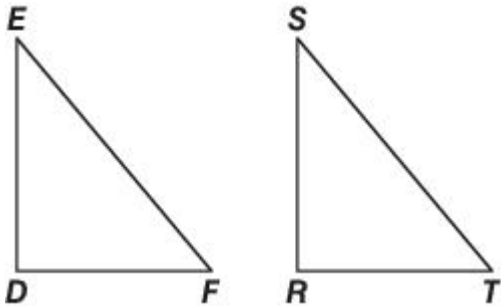
- A. The two statements cannot be used to draw conclusions about congruent segments in the first triangle.

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- Line segment BC is congruent to segment RS instead of segment QR . This answer does not correctly identify the corresponding sides in the triangles.
- B.
- Line segment QS is congruent to segment DF instead of segment EF . This answer does not correctly identify the corresponding sides in the triangles.
- C.
- D. Correct answer.

ItemID A2K.1135470
 Correct D
 Standard(s) MA.9-12.MA.912.G.2.3

10. Triangle DEF is congruent to triangle RST .



If $m\angle D = 90^\circ$ and $m\angle E = 40^\circ$, what is $m\angle T$?

- A. 40°
 B. 50°
 C. 90°
 D. 130°

Answer Choice Rationale

- A. This is the measure of angle S in the triangle.
- B. Correct answer.
- C. This is the measure of angle R in the triangle.
 This answer adds the measures of angle S and angle R , but does not subtract the sum from 180° .
- D.

ItemID A2K.1090026
 Correct B
 Standard(s) MA.9-12.MA.912.G.2.3

Stop! You have finished this exam.