Geometry SIA #2

Multiple Choice
Identify the choice that best completes the statement or answers the question.

1. Find the value of $x$.

- $a. \ 4$
- $b. \ 8$
- $c. \ 6.6$
- $d. \ 6$

2. Find the length of the midsegment. The diagram is not to scale.

- $a. \ 24$
- $b. \ 0$
- $c. \ 42$
- $d. \ 84$

3. Use the information in the diagram to determine the height of the tree. The diagram is not to scale.

- $a. \ 75 \ ft$
- $b. \ 150 \ ft$
- $c. \ 35.5 \ ft$
- $d. \ 37.5 \ ft$
4. Use the information in the diagram to determine the measure of the angle formed by the line from the point on the ground to the top of the building and the side of the building. The diagram is not to scale.

   ![Diagram of a building and a line from the ground to the top of the building.]

   a. 46°  b. 23°  c. 92°  d. 44°

5. \( \overrightarrow{DF} \) bisects \( \angle EDG \). Find \( FG \). The diagram is not to scale.

   ![Diagram showing \( \angle EDG \) and \( \overrightarrow{DF} \) bisecting it.]

   a. 15  b. 14  c. 19  d. 28

6. \( Q \) is equidistant from the sides of \( \angle TSR \). Find the value of \( x \). The diagram is not to scale.

   ![Diagram showing \( \angle TSR \) and \( Q \) equidistant from its sides.]

   a. 27  b. 3  c. 15  d. 30
7. Name the second largest of the four angles named in the figure (not drawn to scale) if the side included by $\angle 1$ and $\angle 2$ is 11 cm, the side included by $\angle 2$ and $\angle 3$ is 16 cm, and the side included by $\angle 3$ and $\angle 1$ is 14 cm.

   a. $\angle 1$  
   b. $\angle 2$  
   c. $\angle 4$  
   d. $\angle 3$

8. List the sides in order from shortest to longest. The diagram is not to scale.

   a. $\overline{LK}, \overline{LJ}, \overline{JK}$  
   b. $\overline{LJ}, \overline{LK}, \overline{JK}$  
   c. $\overline{LJ}, \overline{JK}, \overline{LK}$  
   d. $\overline{LK}, \overline{JK}, \overline{LJ}$

9. Two sides of a triangle have lengths 10 and 15. What must be true about the length of the third side?
   a. less than 25  
   b. less than 10  
   c. less than 15  
   d. less than 5

10. A road sign is in the shape of a regular heptagon. What is the measure of each angle on the sign? Round to the nearest tenth.
   a. 900  
   b. 231.4  
   c. 128.6  
   d. 64.3

11. Find the missing values of the variables. The diagram is not to scale.

   a. $x = 124, y = 125$  
   b. $x = 56, y = 114$  
   c. $x = 114, y = 56$  
   d. $x = 56, y = 124$
12. Find the value of $x$. The diagram is not to scale.

\[
\begin{align*}
(2x + 10)^\circ & \quad 148^\circ \\
(2x)^\circ & \quad 112^\circ 
\end{align*}
\]

a. 90  
 b. 35  
 c. 100  
 d. 45

13. How many sides does a regular polygon have if each exterior angle measures 20?

a. 17 sides  
 b. 20 sides  
 c. 21 sides  
 d. 18 sides

14. Use less than, equal to, or greater than to complete this statement: The measure of each exterior angle of a regular 7-gon is ____ the measure of each exterior angle of a regular 5-gon.

a. cannot tell  
 b. equal to  
 c. less than  
 d. greater than

15. A nonregular hexagon has five exterior angle measures of 55, 60, 69, 57, and 57. What is the measure of the interior angle adjacent to the sixth exterior angle?

a. 128  
 b. 118  
 c. 62  
 d. 108

16. $ABCD$ is a parallelogram. If $m\angle CDA = 66$, then $m\angle BCD = ?$. The diagram is not to scale.

\[
\begin{align*}
&\quad A \\
&\quad B \\
& \quad D \\
&\quad C
\end{align*}
\]

a. 66  
 b. 124  
 c. 114  
 d. 132

17. For the parallelogram, if $m\angle 2 = 5x - 28$ and $m\angle 4 = 3x - 10$, find $m\angle 3$. The diagram is not to scale.

\[
\begin{align*}
&\quad 3 \\
& \quad 4 \\
&\quad 2 \\
&\quad 1
\end{align*}
\]

a. 9  
 b. 17  
 c. 173  
 d. 163
18. Find $AM$ in the parallelogram if $PN = 10$ and $AO = 5$. The diagram is not to scale.

- $a. 5$  
- $b. 10$  
- $c. 5$  
- $d. 10$

19. $LMNO$ is a parallelogram. If $NM = x + 15$ and $OL = 3x + 5$, find the value of $x$ and then find $NM$ and $OL$.

- $a. x = 7, NM = 20, OL = 22$  
- $b. x = 5, NM = 20, OL = 20$  
- $c. x = 7, NM = 22, OL = 22$  
- $d. x = 5, NM = 22, OL = 20$

20. In the figure, the horizontal lines are parallel and $AB = BC = CD$. Find $JM$. The diagram is not to scale.

- $a. 16$  
- $b. 32$  
- $c. 8$  
- $d. 24$
21. In the figure, the horizontal lines are parallel and $AB = BC = CD$. Find $KL$ and $FG$. The diagram is not to scale.

<table>
<thead>
<tr>
<th>Option</th>
<th>KL</th>
<th>FG</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>7.6</td>
<td>7.6</td>
</tr>
<tr>
<td>b.</td>
<td>5.1</td>
<td>7.6</td>
</tr>
<tr>
<td>c.</td>
<td>5.1</td>
<td>5.1</td>
</tr>
<tr>
<td>d.</td>
<td>7.6</td>
<td>5.1</td>
</tr>
</tbody>
</table>

22. If $m\angle B = m\angle D = 39$, find $m\angle C$ so that quadrilateral $ABCD$ is a parallelogram. The diagram is not to scale.

<table>
<thead>
<tr>
<th>Option</th>
<th>Angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>39</td>
</tr>
<tr>
<td>b.</td>
<td>282</td>
</tr>
<tr>
<td>c.</td>
<td>141</td>
</tr>
<tr>
<td>d.</td>
<td>78</td>
</tr>
</tbody>
</table>

23. Find the measure of the numbered angles in the rhombus. The diagram is not to scale.

<table>
<thead>
<tr>
<th>Option</th>
<th>Angles</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>$m\angle 1 = 90$, $m\angle 2 = 41$, and $m\angle 3 = 41$</td>
</tr>
<tr>
<td>b.</td>
<td>$m\angle 1 = 90$, $m\angle 2 = 41$, and $m\angle 3 = 69.5$</td>
</tr>
<tr>
<td>c.</td>
<td>$m\angle 1 = 90$, $m\angle 2 = 49$, and $m\angle 3 = 41$</td>
</tr>
<tr>
<td>d.</td>
<td>$m\angle 1 = 90$, $m\angle 2 = 41$, and $m\angle 3 = 49$</td>
</tr>
</tbody>
</table>

24. $DEFG$ is a rectangle. $DF = 5x - 5$ and $EG = x + 11$. Find the value of $x$ and the length of each diagonal.

<table>
<thead>
<tr>
<th>Option</th>
<th>Equations</th>
<th>Lengths</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>$x = 4$, $DF = 13$, $EG = 13$</td>
<td>$DF = 13$, $EG = 13$</td>
</tr>
<tr>
<td>b.</td>
<td>$x = 4$, $DF = 15$, $EG = 18$</td>
<td>$DF = 15$, $EG = 18$</td>
</tr>
<tr>
<td>c.</td>
<td>$x = 4$, $DF = 15$, $EG = 15$</td>
<td>$DF = 15$, $EG = 15$</td>
</tr>
<tr>
<td>d.</td>
<td>$x = 2$, $DF = 13$, $EG = 13$</td>
<td>$DF = 13$, $EG = 13$</td>
</tr>
</tbody>
</table>
25. In rectangle $KLMN$, $KM = 6x + 16$ and $LN = 49$. Find the value of $x$.

- $K
\begin{array}{ccc}
\text{a. 5.5} & \text{c. 33} \\
\text{b. 4.5} & \text{d. 6.5}
\end{array}$

26. Find the values of $a$ and $b$. The diagram is not to scale.

- $\begin{array}{ccc}
\text{a. } a = 144, b = 67 \\
\text{b. } a = 144, b = 36 \\
\text{c. } a = 113, b = 67 \\
\text{d. } a = 113, b = 36
\end{array}$

27. $\angle J$ and $\angle M$ are base angles of isosceles trapezoid $JKLM$. If $m\angle J = 20x + 9$, and $m\angle M = 14x + 15$, find $m\angle K$.

- $\begin{array}{ccc}
\text{a. 151} & \text{b. 1} & \text{c. 29} \\
\text{d. 75.5}
\end{array}$

28. $LM$ is the midsegment of $\square ABCD$. $AB = 46$ and $DC = 125$. What is $LM$?

- $\begin{array}{ccc}
\text{a. 171} & \text{b. 85.5} & \text{c. 79} \\
\text{d. 95.5}
\end{array}$
29. $\overline{LM}$ is the midsegment of $\square ABCD$. $AB = x + 8$, $LM = 4x + 3$, and $DC = 201$. What is the value of $x$?

![Diagram of parallelogram with midsegment](image)

- a. 33
- b. 29
- c. 238
- d. 37

30. Find $m\angle 1$ and $m\angle 3$ in the kite. The diagram is not to scale.

![Diagram of kite with angles](image)

- a. 51, 51
- b. 39, 39
- c. 39, 51
- d. 51, 39

31. $m\angle R = 130$ and $m\angle S = 80$. Find $m\angle T$. The diagram is not to scale.

![Diagram of quadrilateral with angles](image)

- a. 65
- b. 70
- c. 35
- d. 80

32. The length of a rectangle is $6\frac{1}{2}$ inches and the width is $4\frac{1}{4}$ inches. What is the ratio, using whole numbers, of the length to the width?

- a. 13 : 17
- b. 26 : 34
- c. 17 : 26
- d. 26 : 17
33. Red and grey bricks were used to build a decorative wall. The ratio of red bricks to grey bricks was \( \frac{5}{2} \). There were 175 bricks used in all. How many red bricks were used?
   a. 25   c. 50
   b. 125   d. 35

34. The measure of two complementary angles are in the ratio 1 : 4. What are the degree measures of the two angles?
   a. 45° and 135°   c. 36° and 144°
   b. 23° and 68°   d. 18° and 72°

35. The measures of the angles of a triangle are in the extended ratio 3 : 5 : 7. What is the measure of the smallest angle?
   a. 12   c. 60
   b. 36   d. 84

What is the solution of each proportion?

36. \( \frac{7}{9} = \frac{m}{27} \)
   a. \( \frac{1}{21} \)   b. 21   c. 3   d. \( \frac{7}{3} \)

37. Given the proportion \( \frac{a}{b} = \frac{8}{15} \), what ratio completes the equivalent proportion \( \frac{a}{8} = \frac{b}{?} \)?
   a. \( \frac{15}{b} \)   c. \( \frac{8}{15} \)
   b. \( \frac{b}{15} \)   d. \( \frac{a}{15} \)

The polygons are similar, but not necessarily drawn to scale. Find the value of \( x \).

38. a. 118   b. 29.5   c. 21.7   d. 177
39. You want to draw an enlargement of a design that is printed on a card that is 4 in. by 5 in. You will be drawing this design on an piece of paper that is 8½ in. by 11 in. What are the dimensions of the largest complete enlargement you can make?
   a. 1¾ in. by 10½ in.
   b. 1¾ in. by 4¾ in.
   c. 8½ in. by 4¾ in.
   d. 8½ in. by 10½ in.

Which theorem or postulate proves the two triangles are similar?

40. a. SAS~ Theorem
    b. SA~ Postulate
    c. SSS~ Theorem
    d. AA~ Postulate

Find the geometric mean of the pair of numbers.

41. 6 and 10
   a. \( \sqrt{66} \)
   b. \( \sqrt{70} \)
   c. 60
   d. \( 2\sqrt{15} \)

What are the values of \( a \) and \( b \)?

42. a. \( a = 8, b = 2\sqrt{17} \)
    b. \( a = 18, b = 2\sqrt{17} \)
    c. \( a = 8, b = 8\sqrt{17} \)
    d. \( a = 64, b = 68 \)
43. Find the length of the altitude drawn to the hypotenuse. The triangle is not drawn to scale.

\[ \text{a. } 28 \quad \text{b. } 7\sqrt{3} \quad \text{c. } 147 \quad \text{d. } 2\sqrt{7} \]

44. What is the value of \( x \), given that \( PQ \parallel BC \)?

\[ \text{a. } 8 \quad \text{b. } 9 \quad \text{c. } 6 \quad \text{d. } 12 \]

45. Plots of land between two roads are laid out according to the boundaries shown. The boundaries between the two roads are parallel. What is the length of Plot 3 along Cheshire Road?

\[ \text{a. } 46\frac{2}{3} \text{ yards} \quad \text{c. } 66 \text{ yards} \]
\[ \text{b. } 67\frac{1}{5} \text{ yards} \quad \text{d. } 37\frac{1}{3} \text{ yards} \]
46. What is the value of $x$ to the nearest tenth?

![Triangle Diagram]

Not drawn to scale.

a. 4.8  
   b. 14.4  
   c. 9.4  
   d. 1.7

47. The dashed-lined figure is a dilation image of the solid-lined figure. Is the dilation an enlargement, or a reduction? What is the scale factor of the dilation?

![Graph]

a. 6; enlargement  
   b. 3; enlargement  
   c. 3; reduction  
   d. $\frac{1}{3}$; reduction

48. A microscope shows you an image of an object that is 80 times the object’s actual size. So the scale factor of the enlargement is 80. An insect has a body length of 7 millimeters. What is the body length of the insect under the microscope?

a. 56 millimeters  
   b. 560 centimeters  
   c. 5,600 millimeters  
   d. 560 millimeters
MULTIPLE CHOICE

1. ANS: A  PTS: 1  DIF: L3  REF: 5-1 Midsegments of Triangles
   OBJ: 5-1.1 Use properties of midsegments to solve problems
   TOP: 5-1 Problem 2 Finding Lengths
   KEY: midpoint | midsegment | Triangle Midsegment Theorem  DOK: DOK 2

2. ANS: C  PTS: 1  DIF: L4  REF: 5-1 Midsegments of Triangles
   OBJ: 5-1.1 Use properties of midsegments to solve problems
   TOP: 5-1 Problem 2 Finding Lengths
   KEY: midsegment | Triangle Midsegment Theorem  DOK: DOK 2

3. ANS: A  PTS: 1  DIF: L3  REF: 5-1 Midsegments of Triangles
   OBJ: 5-1.1 Use properties of midsegments to solve problems
   TOP: 5-1 Problem 3 Using a Midsegment of a Triangle
   KEY: midsegment | Triangle Midsegment Theorem | problem solving
   DOK: DOK 1

4. ANS: A  PTS: 1  DIF: L3  REF: 5-1 Midsegments of Triangles
   OBJ: 5-1.1 Use properties of midsegments to solve problems
   TOP: 5-1 Problem 3 Using a Midsegment of a Triangle
   KEY: midsegment | Triangle Midsegment Theorem | problem solving
   DOK: DOK 1

5. ANS: B  PTS: 1  DIF: L3  REF: 5-2 Perpendicular and Angle Bisectors
   OBJ: 5-2.1 Use properties of perpendicular bisectors and angle bisectors
   TOP: 5-2 Problem 3 Using the Angle Bisector Theorem
   KEY: angle bisector | Angle Bisector Theorem  DOK: DOK 2

6. ANS: B  PTS: 1  DIF: L2  REF: 5-2 Perpendicular and Angle Bisectors
   OBJ: 5-2.1 Use properties of perpendicular bisectors and angle bisectors
   TOP: 5-2 Problem 3 Using the Angle Bisector Theorem
   KEY: angle bisector | Converse of the Angle Bisector Theorem  DOK: DOK 2

7. ANS: A  PTS: 1  DIF: L3  REF: 5-6 Inequalities in One Triangle
   OBJ: 5-6.1 Use inequalities involving angles and sides of triangles
   TOP: 5-6 Problem 2 Using Theorem 5-10
   KEY: corollary to the Triangle Exterior Angle Theorem  DOK: DOK 2

8. ANS: C  PTS: 1  DIF: L3  REF: 5-6 Inequalities in One Triangle
   OBJ: 5-6.1 Use inequalities involving angles and sides of triangles
   TOP: 5-6 Problem 3 Using Theorem 5-11
   DOK: DOK 1

9. ANS: A  PTS: 1  DIF: L3  REF: 5-6 Inequalities in One Triangle
   OBJ: 5-6.1 Use inequalities involving angles and sides of triangles
   TOP: 5-6 Problem 5 Finding Possible Side Lengths
   KEY: Triangle Inequality Theorem  DOK: DOK 2
10. ANS: C PTS: 1 DIF: L3
   REF: 6-1 The Polygon Angle-Sum Theorems
   OBJ: 6-1.1 Find the sum of the measures of the interior angles of a polygon
   TOP: 6-1 Problem 2 Using the Polygon Angle-Sum
   KEY: sum of angles of a polygon | equilateral | Corollary to the Polygon Angle-Sum Theorem | regular polygon
   DOK: DOK 2

11. ANS: C PTS: 1 DIF: L3
    REF: 6-1 The Polygon Angle-Sum Theorems
    OBJ: 6-1.1 Find the sum of the measures of the interior angles of a polygon
    TOP: 6-1 Problem 3 Using the Polygon Angle-Sum Theorem
    KEY: exterior angle | Polygon Angle-Sum Theorem
    DOK: DOK 2

12. ANS: D PTS: 1 DIF: L4
    REF: 6-1 The Polygon Angle-Sum Theorems
    OBJ: 6-1.1 Find the sum of the measures of the interior angles of a polygon
    TOP: 6-1 Problem 3 Using the Polygon Angle-Sum Theorem
    KEY: Polygon Angle-Sum Theorem
    DOK: DOK 2

13. ANS: D PTS: 1 DIF: L3
    REF: 6-1 The Polygon Angle-Sum Theorems
    OBJ: 6-1.2 Find the sum of the measures of the exterior angles of a polygon
    TOP: 6-1 Problem 4 Finding an Exterior Angle Measure
    KEY: sum of angles of a polygon
    DOK: DOK 2

14. ANS: C PTS: 1 DIF: L4
    REF: 6-1 The Polygon Angle-Sum Theorems
    OBJ: 6-1.2 Find the sum of the measures of the exterior angles of a polygon
    TOP: 6-1 Problem 4 Finding an Exterior Angle Measure
    KEY: sum of angles of a polygon
    DOK: DOK 2

15. ANS: B PTS: 1 DIF: L4
    REF: 6-1 The Polygon Angle-Sum Theorems
    OBJ: 6-1.2 Find the sum of the measures of the exterior angles of a polygon
    TOP: 6-1 Problem 4 Finding an Exterior Angle Measure
    KEY: hexagon | angle | exterior angle
    DOK: DOK 2

16. ANS: C PTS: 1 DIF: L2
    REF: 6-2 Properties of Parallelograms
    OBJ: 6-2.1 Use relationships among sides and angles of parallelograms
    TOP: 6-2 Problem 1 Using Consecutive Angles
    KEY: parallelogram | consecutive angles
    DOK: DOK 1

17. ANS: D PTS: 1 DIF: L4
    REF: 6-2 Properties of Parallelograms
    OBJ: 6-2.1 Use relationships among sides and angles of parallelograms
    TOP: 6-2 Problem 1 Using Consecutive Angles
    KEY: algebra | parallelogram | opposite angles | consecutive angles
    DOK: DOK 2

18. ANS: A PTS: 1 DIF: L2
    REF: 6-2 Properties of Parallelograms
    OBJ: 6-2.2 Use relationships among diagonals of parallelograms
    TOP: 6-2 Problem 3 Using Algebra to Find Lengths
    KEY: parallelogram | diagonal
    DOK: DOK 1
19. **ANS:** B  
 **PTS:** 1  
 **DIF:** L2  
 **REF:** 6-2 Properties of Parallelograms
 **OBJ:** 6-2.1 Use relationships among sides and angles of parallelograms
 **TOP:** 6-2 Problem 3 Using Algebra to Find Lengths  
 **KEY:** parallelogram | algebra  
 **DOK:** DOK 2

20. **ANS:** D  
 **PTS:** 1  
 **DIF:** L3  
 **REF:** 6-2 Properties of Parallelograms
 **OBJ:** 6-2.1 Use relationships among sides and angles of parallelograms
 **TOP:** 6-2 Problem 4 Using Parallel Lines and Transversals  
 **KEY:** transversal | parallel lines  
 **DOK:** DOK 2

21. **ANS:** D  
 **PTS:** 1  
 **DIF:** L2  
 **REF:** 6-2 Properties of Parallelograms
 **OBJ:** 6-2.1 Use relationships among sides and angles of parallelograms
 **TOP:** 6-2 Problem 4 Using Parallel Lines and Transversals  
 **KEY:** parallel lines | transversal  
 **DOK:** DOK 1

22. **ANS:** C  
 **PTS:** 1  
 **DIF:** L2  
 **REF:** 6-3 Proving That a Quadrilateral Is a Parallelogram
 **OBJ:** 6-3.1 Determine whether a quadrilateral is a parallelogram
 **TOP:** 6-3 Problem 1 Finding Values for Parallelograms  
 **KEY:** opposite angles | parallelogram  
 **DOK:** DOK 2

23. **ANS:** D  
 **PTS:** 1  
 **DIF:** L3  
 **REF:** 6-4 Properties of Rhombuses, Rectangles, and Squares
 **OBJ:** 6-4.2 Use properties of diagonals of rhombuses and rectangles
 **TOP:** 6-4 Problem 2 Finding Angle Measures  
 **KEY:** diagonal | rhombus  
 **DOK:** DOK 2

24. **ANS:** C  
 **PTS:** 1  
 **DIF:** L3  
 **REF:** 6-4 Properties of Rhombuses, Rectangles, and Squares
 **OBJ:** 6-4.2 Use properties of diagonals of rhombuses and rectangles
 **TOP:** 6-4 Problem 3 Finding Diagonal Length  
 **KEY:** rectangle | algebra | diagonal  
 **DOK:** DOK 2

25. **ANS:** A  
 **PTS:** 1  
 **DIF:** L2  
 **REF:** 6-4 Properties of Rhombuses, Rectangles, and Squares
 **OBJ:** 6-4.2 Use properties of diagonals of rhombuses and rectangles
 **TOP:** 6-4 Problem 3 Finding Diagonal Length  
 **KEY:** rectangle | algebra | diagonal  
 **DOK:** DOK 2

26. **ANS:** A  
 **PTS:** 1  
 **DIF:** L2  
 **REF:** 6-6 Trapezoids and Kites
 **OBJ:** 6-6.1 Verify and use properties of trapezoids and kites
 **TOP:** 6-6 Problem 1 Finding Angle Measures in Trapezoids  
 **KEY:** trapezoid | base angles  
 **DOK:** DOK 2

27. **ANS:** A  
 **PTS:** 1  
 **DIF:** L4  
 **REF:** 6-6 Trapezoids and Kites
 **OBJ:** 6-6.1 Verify and use properties of trapezoids and kites
 **TOP:** 6-6 Problem 2 Finding Angle Measures in Isosceles Trapezoids  
 **KEY:** algebra | isosceles trapezoid | base angles | trapezoid  
 **DOK:** DOK 2

28. **ANS:** B  
 **PTS:** 1  
 **DIF:** L2  
 **REF:** 6-6 Trapezoids and Kites
 **OBJ:** 6-6.1 Verify and use properties of trapezoids and kites
 **TOP:** 6-6 Problem 3 Using the Midsegment of a Trapezoid  
 **KEY:** trapezoid | base angles  
 **DOK:** DOK 2
29. ANS: B  PTS: 1  DIF: L3  REF: 6-6 Trapezoids and Kites
OBJ: 6-6.1 Verify and use properties of trapezoids and kites
TOP: 6-6 Problem 3 Using the Midsegment of a Trapezoid
DOK: DOK 2
KEY: trapezoid | base angles

30. ANS: C  PTS: 1  DIF: L3  REF: 6-6 Trapezoids and Kites
OBJ: 6-6.1 Verify and use properties of trapezoids and kites
TOP: 6-6 Problem 4 Finding Angle Measures in Kites
DOK: DOK 2
KEY: kite | diagonal

31. ANS: B  PTS: 1  DIF: L2  REF: 6-6 Trapezoids and Kites
OBJ: 6-6.1 Verify and use properties of trapezoids and kites
TOP: 6-6 Problem 4 Finding Angle Measures in Kites
DOK: DOK 2
KEY: kite | sum of interior angles

32. ANS: D  PTS: 1  DIF: L3  REF: 7-1 Ratios and Proportions
OBJ: 7-1.1 Write ratios and solve proportions
TOP: 7-1 Problem 1 Writing a Ratio
KEY: ratio DOK: DOK 2

33. ANS: B  PTS: 1  DIF: L3  REF: 7-1 Ratios and Proportions
OBJ: 7-1.1 Write ratios and solve proportions
TOP: 7-1 Problem 2 Dividing a Quantity into a Given Ratio
DOK: DOK 2
KEY: ratio | word problem

34. ANS: D  PTS: 1  DIF: L3  REF: 7-1 Ratios and Proportions
OBJ: 7-1.1 Write ratios and solve proportions
TOP: 7-1 Problem 2 Dividing a Quantity into a Given Ratio
DOK: DOK 2
KEY: ratio

35. ANS: B  PTS: 1  DIF: L3  REF: 7-1 Ratios and Proportions
OBJ: 7-1.1 Write ratios and solve proportions
TOP: 7-1 Problem 3 Using an Extended Ratio
KEY: ratio | extended ratio | interior angles of a triangle DOK: DOK 2

36. ANS: B  PTS: 1  DIF: L2  REF: 7-1 Ratios and Proportions
OBJ: 7-1.1 Write ratios and solve proportions
TOP: 7-1 Problem 4 Solving a Proportion
KEY: proportion | Cross-Product Property DOK: DOK 1

37. ANS: B  PTS: 1  DIF: L2  REF: 7-1 Ratios and Proportions
OBJ: 7-1.1 Write ratios and solve proportions
TOP: 7-1 Problem 5 Writing Equivalent Proportions
KEY: proportion | Properties of Proportions | equivalent proportions DOK: DOK 2

38. ANS: B  PTS: 1  DIF: L3  REF: 7-2 Similar Polygons
OBJ: 7-2.1 Identify and apply similar polygons
TOP: 7-2 Problem 3 Using Similar Polygons
DOK: DOK 2
KEY: corresponding sides | proportion

39. ANS: D  PTS: 1  DIF: L4  REF: 7-2 Similar Polygons
OBJ: 7-2.1 Identify and apply similar polygons
TOP: 7-2 Problem 4 Using Similarity
KEY: similar polygons | word problem DOK: DOK 2

40. ANS: D  PTS: 1  DIF: L2  REF: 7-3 Proving Triangles Similar
OBJ: 7-3.1 Use the AA Postulate and the SAS and SSS Theorems
TOP: 7-3 Problem 3 Proving Triangles Similar
DOK: DOK 2
KEY: Angle-Angle Similarity Postulate
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