Chapters 4-6 • Exam **Form B**

Name _____ **Period** _____ **Date** _____

Part A

Identify each statement as true or false.

1. If two sides and an included angle of one triangle are congruent to two sides and an included angle of another triangle, then the triangles are congruent.

2. The sum of the measures of the interior angles of a decagon is 1800°.

3. The vertex angles of a kite are congruent.

4. It is possible to create a triangle with side lengths 12 cm, 7 cm, and 6 cm.

5. In a parallelogram, the consecutive angles are congruent.

6. A diagonal of a parallelogram divides the parallelogram into two congruent triangles.

7. Given two sides and a non-included angle, you can always construct exactly one triangle.

8. If the opposite angles of a rhombus are supplementary, then the rhombus is a square.

9. The opposite angles of a quadrilateral inscribed in a circle are supplementary.

10. The diagonals of a rectangle are perpendicular.

11. In an equilateral triangle, the median to a side is also the bisector of the angle opposite the side.

12. It is always possible to find a sequence of reflections to complete any rigid transformation.

Part B

Complete each statement.

1. In a regular *n*-gon, the sum of the measures of the exterior angles is _____.

2. If one of the base angles of an isosceles triangle has measure 70°, then the vertex angle has measure _____.

3. The two diagonals of a _____ are perpendicular bisectors of one another and are congruent.

4. A composition of two reflections over two intersecting lines is equivalent to a single _____ .

5. In $\triangle ABC$, if $m\angle A = 50°$, $m\angle B = 72°$, and $m\angle C = 58°$, then _____ is the shortest side.

6. In a regular decagon, each interior angle has measure _____.

7. If the midsegment of a trapezoid has length 11 cm and one of the bases has length 13 cm, then the other base has length _____.

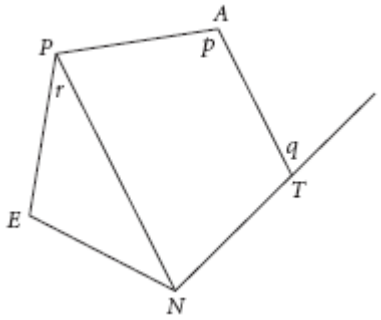
8. A ____ is a transformation that slides a figure along a straight-line path, moving each point the same distance in the same direction.

9. The criteria for triangle congruence follow from the definition of congruence in terms of rigid motion in that rigid motions transform a triangle so that corresponding sides and angles _____, and are therefore congruent.

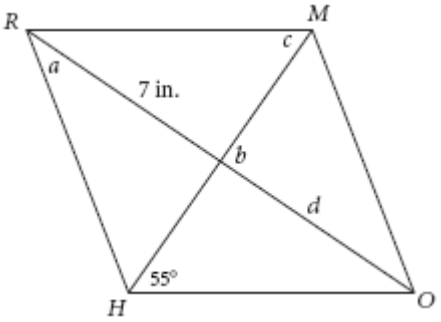
10. The ordered pair rule $(x, y) \rightarrow (-x + h, y + k)$ is a _____.

Part C

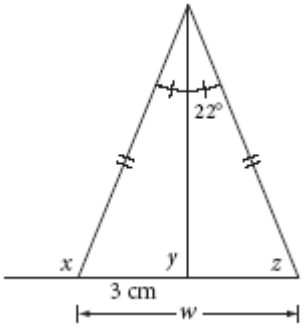
1. *PENTA* is a regular pentagon.
p = _____
q = _____
r = _____



2. *RHOM* is a rhombus.
a = _____
b = _____
c = _____
d = _____



3. *w* = _____
x = _____
y = _____
z = _____

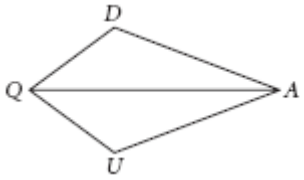


Part D

Provide each missing reason or statement in the flowchart proof.

Given: $\angle UQA \cong \angle DQA$
$\overline{QU} \cong \overline{QD}$

Show: $\angle U \cong \angle D$



Flowchart Proof