5 Chapter 5 Test, Form 2A

SCORE _____

Write the letter for the correct answer in the blank at the right of each question.

For Questions 1-4, refer to the figure.

1. Name an angle bisector.

 $\mathbf{A} \quad \overline{KI}$

 $\mathbf{B} \quad \overrightarrow{GL}$

 $\mathbf{C} \quad \overleftrightarrow{JM}$

 \mathbf{D} \overline{HJ}

K

1.____

Assessment

2. Name a median.

 $\mathbf{F} \overline{KI}$

 $\overrightarrow{G} \overrightarrow{GL}$

 $\mathbf{H} \stackrel{\longleftrightarrow}{JM}$

 \mathbf{J} \overline{HJ}



3. Name an altitude.

 $\mathbf{A} \quad \overline{KI}$

 $\mathbf{B} \quad \overrightarrow{GL}$

 $\mathbf{C} \stackrel{\longleftarrow}{JM}$

 $\mathbf{D} \overline{HJ}$

3. ____

4. Name a perpendicular bisector.

 \mathbf{F} \overline{KI}

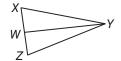
 \overrightarrow{G} \overrightarrow{GL}

 $\mathbf{H} \stackrel{\longleftrightarrow}{JM}$

J \overline{HJ}

4.____

For Questions 5-7, refer to the figure to determine which is a true statement for the given information.



5. \overline{YW} is an angle bisector.

A $\angle YWZ$ is a right angle.

 $\mathbf{C} \quad XW = WZ$

 $\mathbf{B} \angle XYW \cong \angle ZYW$

 $\mathbf{D} \quad XY = ZY$

5.

6. \overline{YW} is an altitude.

 $\mathbf{F} \angle YWZ$ is a right angle.

 $\mathbf{H} \quad XW = WZ$

 $\mathbf{G} \ \angle XYW \cong \angle ZYW$

 $\mathbf{J} \quad XY = ZY$

6. ____

7. \overline{YW} is a median.

A $\angle YWZ$ is a right angle.

 $\mathbf{C} \quad XW = WZ$

 $\mathbf{B} \angle XYW \cong \angle ZYW$

D XY = ZY

7. ____

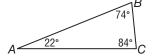
8. Name the longest side of $\triangle ABC$.

 $\mathbf{F} \ \overline{AB}$

 $\mathbf{H} \quad \overline{AC}$

 \mathbf{G} \overline{BC}

J cannot tell



8. ____

9. Name the angle with greatest measure in $\triangle DEF$.

 $\mathbf{A} \angle D$

 \mathbf{C} $\angle F$

 \mathbf{B} $\angle E$

D cannot tell



9. ____

10. Which theorem compares the sides of the same triangle?

F Hinge Theorem

H Exterior Angle Inequality Theorem

G Converse of the Hinge Theorem

J Triangle Inequality Theorem

10.____

11. Tisha wants to plant a garden in the widest corner of her triangular backyard. The backyard is bordered by the back of the house that is 50 feet long, fence A that is 27 feet long, and fence B that is 35 feet long. Which corner has the widest measure?

A corner between fences A and B

B all three corners have the same measure

C corner between the back of the house and fence A

D corner between the back of the house and fence B

11.____

Chapter 5 Test, Form 2A (continued)

12. Find the possible values for $m \angle 1$.

F $90 > m \angle 1 > 74$ **G** $180 > m \angle 1 > 74$

H $0 < m \angle 1 < 74$



J $m \angle 1 = 106$

12. ___

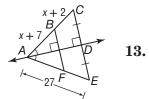
13. Find the value of x.

A 9

C 27

B 11

D 32



14. Which is another name for an indirect proof?

F proof by deduction

H proof by inverse

G proof by converse

J proof by contradiction

- 14.
- **15.** Choose the assumption you would make to start an indirect proof of x < 2.

 $\mathbf{A} \quad x > 2$

B $x \ge 2$

C x = 2

 $\mathbf{D} \ x \leq 2$

- 15. _____
- **16.** Choose the assumption you would make to start an indirect proof.

Given: $\angle 1$ is an exterior angle of $\triangle ABC$.

Prove: $m \angle 1 = m \angle B + m \angle C$

F $\angle 1$ is not an exterior angle of $\triangle ABC$.

G $\angle 1$ is an interior angle of $\triangle ABC$.

H $m \angle 1 \neq m \angle B + m \angle C$

J $m \angle 1 = m \angle B$

16. ____

17. Which of the following sets of numbers can be the lengths of the sides of a triangle?

A 6, 6, 12

B 6, 7, 13

C $\sqrt{2}$, $\sqrt{5}$, $\sqrt{15}$ **D** 2.6, 8.1, 10.2

17. _

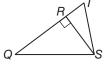
18. What is the relationship between the lengths of \overline{QS} and \overline{RS} ?

 $\mathbf{F} \quad QS = RS$

 $\mathbf{H} \ QS > RS$

G QS < RS

J cannot tell



18.

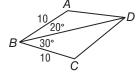
19. What is the relationship between the lengths of \overline{DC} and \overline{AD} ?

 $\mathbf{A} \quad DC < AD$

 \mathbf{C} DC = AD

B DC > AD

D cannot tell



19. _

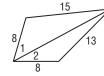
20. What is the relationship between the measures of $\angle 1$ and $\angle 2$?

 $\mathbf{F} \quad m \angle 1 = m \angle 2$

H $m \angle 1 > m \angle 2$

G $m \angle 1 < m \angle 2$

J cannot tell



20.

Bonus \overline{YW} bisects $\angle XYZ$ in $\triangle XYZ$. Point W is on \overline{XZ} . If $m \angle XYW = 2x + 18$ and $m \angle ZYW = x^2 - 5x$, find the possible value(s) of x.

B: