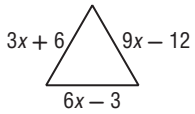
NAME _____ DATE _____ PERIOD _____

4 Chapter 4 Test, Form 2A

SCORE _____

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

1. What is the length of the sides of this equilateral triangle?

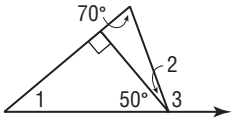


A 42 **C** 15
B 30 **D** 12 **1.** _____

2. How would $\triangle ABC$ with vertices $A(4, 1)$, $B(2, -1)$, and $C(-2, -1)$ be classified based on the length of its sides?

F equilateral **G** isosceles **H** scalene **J** right **2.** _____

Use the figure for Questions 3 and 4.



3. What is $m\angle 1$?

A 40 **B** 50 **C** 70 **D** 90 **3.** _____

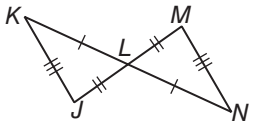
4. What is $m\angle 3$?

F 40 **G** 70 **H** 90 **J** 110 **4.** _____

5. If $\triangle DJL \cong \triangle EGS$, which segment in $\triangle EGS$ corresponds to $\overline{DL}$?

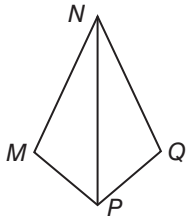
A $\overline{EG}$ **B** $\overline{ES}$ **C** $\overline{GS}$ **D** $\overline{GE}$ **5.** _____

6. Which triangles are congruent in the figure?



F $\triangle KLJ \cong \triangle MNL$
G $\triangle JLK \cong \triangle NLM$
H $\triangle JKL \cong \triangle LMN$
J $\triangle JKL \cong \triangle MNL$ **6.** _____

7. Quadrilateral $MNQP$ is made of two congruent triangles. $\overline{NP}$ bisects $\angle N$ and $\angle P$. In the quadrilateral, $m\angle N = 50$ and $m\angle P = 100$. What is the measure of $\angle M$?



A 25 **C** 60
B 50 **D** 105 **7.** _____

8. The coordinates of the vertices of $\triangle CDE$ are $C(-3, 1)$, $D(-1, 4)$, and $E(-6, 4)$. A transformation applied to $\triangle CDE$ creates a congruent triangle $\triangle SQR$. The new coordinates of two vertices are $Q(-1, 6)$ and $R(-6, 6)$. What are the coordinates of S?

F $(-3, 3)$ **G** $(1, 3)$ **H** $(-1, 1)$ **J** $(-1, 3)$ **8.** _____

Assessment

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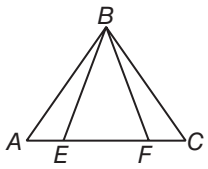
4 Chapter 4 Test, Form 2A *(continued)*

9. If $\triangle ABC$ is isosceles with vertex angle $\angle B$, and $\overline{AE} \cong \overline{FC}$, which theorem or postulate can be used to prove $\triangle AEB \cong \triangle CFB$?



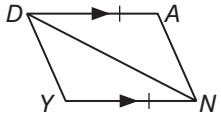
A SSS **C** ASA

B SAS **D** AAS **9.** ____

Use the proof for Questions 10 and 11.

Given: $\overline{DA} \parallel \overline{YN}$
$\overline{DA} \cong \overline{YN}$

Prove: $\angle NDY \cong \angle DNA$



Proof:

Statements	Reasons
1. $\overline{DA} \parallel \overline{YN}$	1. Given
2. $\angle ADN \cong \angle YND$	2. Alt. int. $\measuredangle$s are $\cong$.
3. $\overline{DA} \cong \overline{YN}$	3. Given
4. $\overline{DN} \cong \overline{DN}$	4. Reflexive Property
5. $\triangle NDY \cong \triangle DNA$	5. (Question 10)
6. $\angle NDY \cong \angle DNA$	6. (Question 11)

10. What is the reason for statement 5?

F ASA **H** SAS

G AAS **J** SSS **10.** ____

11. What is the reason for statement 6?

A Alt. int. $\measuredangle$s are $\cong$. **C** Corr. angles are $\cong$.

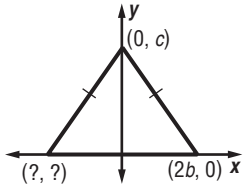
B CPCTC **D** Isosceles Triangle Theorem **11.** ____

12. What is the classification of a triangle with vertices $A(3, 3)$, $B(6, -2)$, $C(0, -2)$ by the length of its sides?

F isosceles **H** equilateral

G scalene **J** right **12.** ____

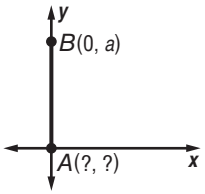
13. What are the missing coordinates of the triangle?



A $(-2b, 0)$ **C** $(-c, 0)$

B $(0, 2b)$ **D** $(0, -c)$ **13.** ____

Bonus Name the coordinates of points A and C in isosceles right $\triangle ABC$ if point C is in the second quadrant.



B: _____

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