Chapter 4 PRACTICE Test: Congruent Triangles

___ LT 1: I can identify and classify triangles by angles and by sides.

___ LT 2: I can apply the triangle angle-sum theorem and exterior angle theorem.

___ LT 3: I can name and use corresponding parts of congruent triangles.

___ LT 4: I can apply the SSS, SAS, ASA, and AAS postulates to test and prove triangle congruence.

___ LT 5: I can use properties of isosceles and equilateral triangles.

확  LT 1: I can identify and classify triangles by sides and by angles.

Classify each triangle as acute, equiangular, right, or obtuse:

1. \( \triangle ADB \)

2. \( \triangle BCD \)

3. \( \triangle ABC \)

Classify each triangle as equilateral, isosceles, or scalene.

4. \( \triangle ABD \)

5. \( \triangle ABC \)

6. \( \triangle EDC \)

7. \( \triangle BDC \)

확  LT 2: I can apply the triangle angle-sum theorem and exterior angle theorem.

Find the measure of each angle AND give a reason for how you know.

8. \( m\angle 1 = \) Reason: 

9. \( m\angle 2 = \) Reason: 

10. \( m\angle 3 = \) Reason: 

확  LT 3: I can name and use corresponding parts of congruent triangles.

Show that the polygons are congruent by identifying all corresponding congruent parts.
Then write a congruence statement.

11. \( \triangle ABC \) to \( \triangle DEF \)

12. \( \triangle XYZ \) to \( \triangle LJK \)
LT 4: I can apply the SSS, SAS, ASA, and AAS postulates to test and prove triangle congruence.

13. Determine whether \( \triangle ABC \cong \triangle XYZ \). Explain.
   \( A(5, 2), \ B(1, 5), \ C(0, 0) \quad X(-3, 3), \ Y(-7, 6), \ Z(-8, 1) \)

14. Given: \( \triangle KPL \) is equilateral, \( \overline{JP} \cong \overline{MP} \), and \( \angle JPK \cong \angle MPL \)
   Prove: \( \triangle JPK \cong \triangle MPL \)

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15. Given: \( \overline{AB} \parallel \overline{DC} \) and \( \overline{AB} \cong \overline{DC} \).
   Prove: \( \triangle ABE \cong \triangle CDE \) (paragraph or two-column – your choice)

LT 5: I can use properties of isosceles and equilateral triangles.

Find the value of each variable.

16. \[ x + 4 \]
    \[ y \]
    \[ 6x - 1 \]
    \[ 7x - 2 \]

17. \[ \triangle \]
    \[ 12 \]
    \[ 52^\circ \]

Assume the figure to the right is drawn to scale. Find each measure. Justify your answer.

18. \( m\angle B = \)

19. \( \overline{AB} = \)

20. \( m\angle C = \)