

Activity 10

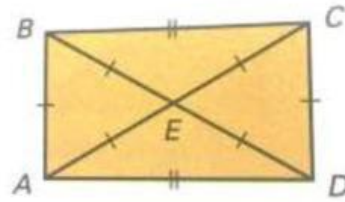
A. In the figure ABCD, classify each triangle by its sides.

1. $\triangle ABC$ _____

2. $\triangle BDC$ _____

3. $\triangle AEB$ _____

4. $\triangle BCE$ _____



B. In the figure, $\overrightarrow{AB} \parallel \overrightarrow{CD}$ and $\overrightarrow{AD} \perp \overrightarrow{BC}$. Find the measure of the following angles.

5. $\angle 1$ _____

6. $\angle 2$ _____

7. $\angle 3$ _____

8. $\angle 4$ _____

9. $\angle 5$ _____

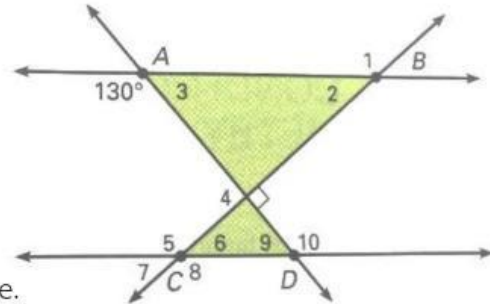
10. $\angle 6$ _____

11. $\angle 7$ _____

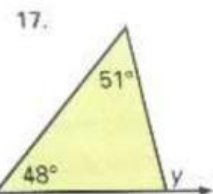
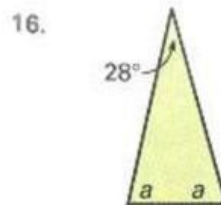
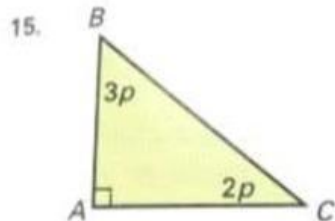
12. $\angle 8$ _____

13. $\angle 9$ _____

14. $\angle 10$ _____



C. Find the measure of the unknown angle in each figure.



D. Complete each statement with always, sometimes, or never.

18. An isosceles triangle is _____ scalene.

19. A right triangle is _____ isosceles.

20. An exterior angle of a triangle is _____ acute.

21. Isosceles triangles are _____ acute.

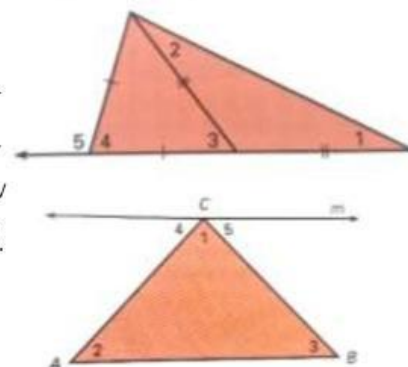
22. In a right triangle, the acute angles are _____ complementary.

E. In the figure, $m\angle 1 = x^\circ$

23. Write an expression for $m\angle 3$. _____

24. Write an expression for $m\angle 5$. _____

25. In the figure on the right, line m is parallel to $\overline{AB}$, show that the sum of the angles of a triangle is equal to 180° .



Classify each statement as True or False.

26 The sum of the measures of the interior angles of a 11-gon is 1820° . _____

27. The measure of an interior angle of a regular 18-gon is 160° . _____

28. A regular polygon in which each interior angle measures 168° has 30 sides. _____

29. An interior angle of a regular polygon cannot have a measure of 148° . _____

30. If the sum of the interior angles of a regular polygon is 15840° and the measure of each exterior angle is 4° , how many sides does the polygon have?