Activity 10

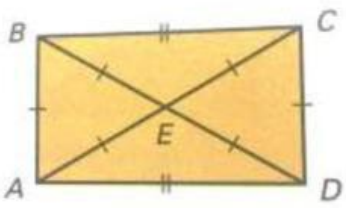
A. In the figure ABCD, classify each triangle by its sides.

1. ΔABC _____

2. ΔBDC _____

3. ΔAEB _____

4. ΔBCE _____



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

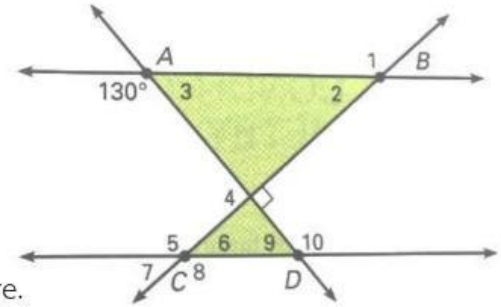
5. $\angle 1$ _____ 6. $\angle 2$ _____

7. $\angle 3$ _____ 8. $\angle 4$ _____

9. $\angle 5$ _____ 10. $\angle 6$ _____

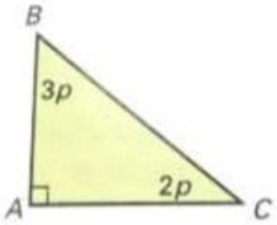
11. $\angle 7$ _____ 12. $\angle 8$ _____

13. $\angle 9$ _____ 14. $\angle 10$ _____

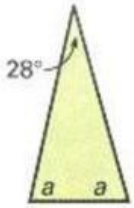


C. Find the measure of the unknown angle in each figure.

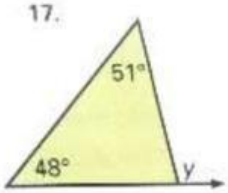
15.



16.



17.



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.

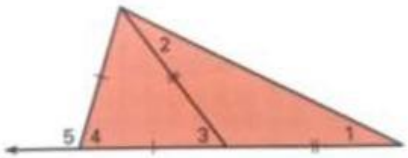
21. Isosceles triangles are _____ acute.

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

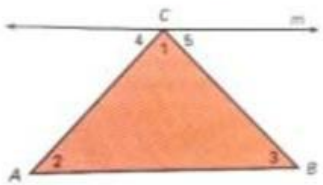
E. In the figure, $m\angle 1 = x^0$

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 180^0.



Classify each statement as True or False.

26 The sum of the measures of the interior angles of a 11-gon is 1820^0. _____

27. The measure of an interior angle of a regular 18-gon is 160^0. _____

28. A regular polygon in which each interior angle measures 168^0 has 30 sides. _____

29. An interior angle of a regular polygon cannot have a measure of 148^0. _____

30. If the sum of the interior angles of a regular polygon is 15840^0 and the measure of each exterior angle is 4^0, how many sides does the polygon have?

LIVEWORKSHEETS