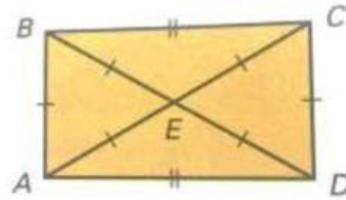


Activity 10

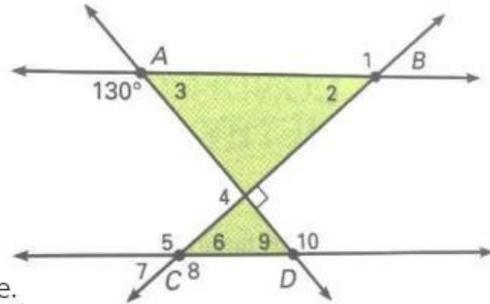
A. In the figure ABCD, classify each triangle by its sides.

1. $\triangle ABC$ _____
2. $\triangle BDC$ _____
3. $\triangle AEB$ _____
4. $\triangle BCE$ _____

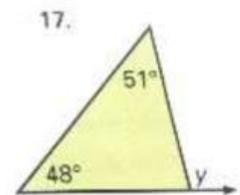
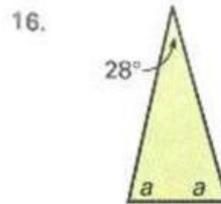
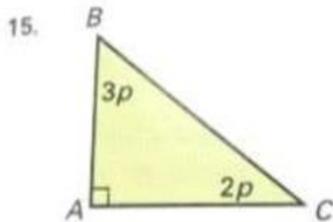


B. In the figure, $\overline{AB} \parallel \overline{CD}$ and $\overline{AD} \perp \overline{BC}$. Find the measure of the following angles.

- | | |
|----------------------|-----------------------|
| 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.



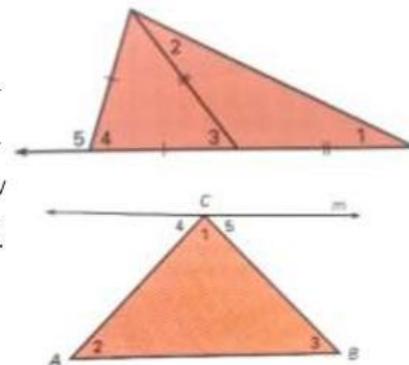
D. Complete each statement with always, sometimes, or never.

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?