4-1 Practice

Classifying Triangles

Classify each triangle as *acute*, *equiangular*, *obtuse*, or *right*.
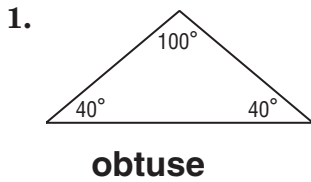
1.

100°
40°   40°

obtuse

2.

85°
30°
65°

acute

3.

90°
30°   60°
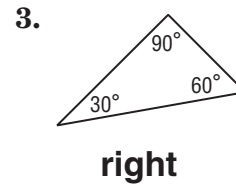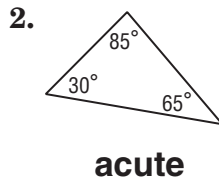
right

Classify each triangle in the figure at the right by its angles and sides.

4. △*ABD*

equiangular; equilateral

5. △*ABC*

right; scalene

6. △*EDC*

right; scalene

7. △*BDC*

obtuse; isosceles
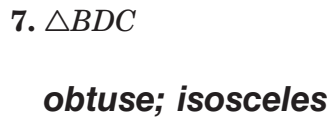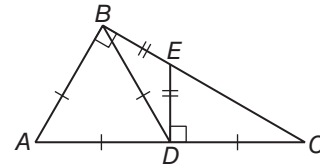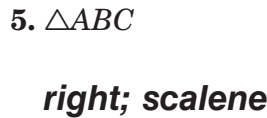
ALGEBRA **For each triangle, find *x* and the measure of each side.**

8. △*FGH* is an equilateral triangle with $FG = x + 5$, $GH = 3x - 9$, and $FH = 2x - 2$.
$x = 7$; $FG = 12$, $GH = 12$, $FH = 12$

9. △*LMN* is an isosceles triangle, with $LM = LN$, $LM = 3x - 2$, $LN = 2x + 1$, and $MN = 5x - 2$.
$x = 3$; $LM = 7$, $LN = 7$, $MN = 13$

Find the measures of the sides of △*KPL* and classify each triangle by its sides.

10. $K(-3, 2)$, $P(2, 1)$, $L(-2, -3)$
$KP = \sqrt{26}$, $PL = 4\sqrt{2}$, $LK = \sqrt{26}$; isosceles

11. $K(5, -3)$, $P(3, 4)$, $L(-1, 1)$
$KP = \sqrt{53}$, $PL = 5$, $LK = 2\sqrt{13}$; scalene

12. $K(-2, -6)$, $P(-4, 0)$, $L(3, -1)$
$KP = 2\sqrt{10}$, $PL = 5\sqrt{2}$, $LK = 5\sqrt{2}$; isosceles

13. DESIGN Diana entered the design at the right in a logo contest sponsored by a wildlife environmental group. Use a protractor. How many right angles are there? **5**