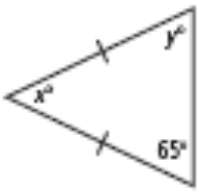
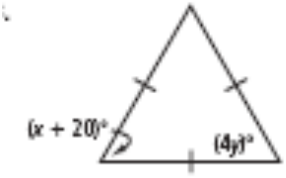
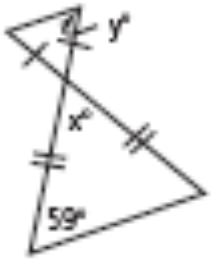
BECA / Huson / 10th Grade Geometry Name:
26 November 2018

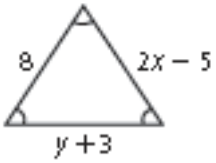
4.1 Homework: Isosceles & Equilateral Triangles

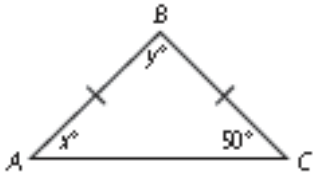
Find the value of x and y.



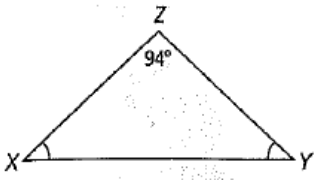




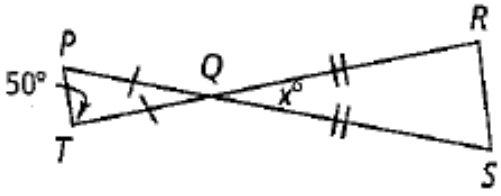




What is $m\angle X$?



What is the value of x? What is the value of <R?



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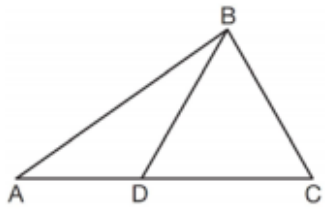
For the following problems, you **must** mark up the diagram or **draw** a diagram representing the question before you answer the question.

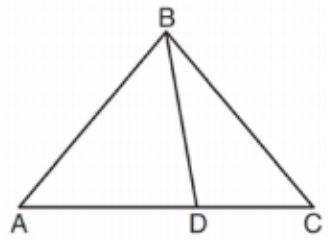
In the diagram of $\triangle ABC$ below, $\overline{BD}$ is drawn to side $\overline{AC}$.



If $m\angle A = 35$, $m\angle ABD = 25$, and $m\angle C = 60$, which type of triangle is $\triangle BCD$?

1) equilateral
2) scalene
3) obtuse
4) right

In the diagram below, $m\angle BDC = 100°$, $m\angle A = 50°$, and $m\angle DBC = 30°$.



Which statement is true?

1) $\triangle ABD$ is obtuse.
2) $\triangle ABC$ is isosceles.
3) $m\angle ABD = 80°$
4) $\triangle ABD$ is scalene.

If the measures of the angles of a triangle are represented by $2x$, $3x - 15$, and $7x + 15$, the triangle is

1) an isosceles triangle
2) a right triangle
3) an acute triangle
4) an equiangular triangle

In right triangle ABC, $m\angle C = 3y - 10$, $m\angle B = y + 40$, and $m\angle A = 90$. What type of right triangle is triangle ABC?

1) scalene
2) isosceles
3) equilateral
4) obtuse

In $\triangle ABC$, $m\angle A = 3x + 1$, $m\angle B = 4x - 17$, and $m\angle C = 5x - 20$. Which type of triangle is $\triangle ABC$?

1) right
2) scalene
3) isosceles
4) equilateral

In $\triangle DEF$, $m\angle D = 3x + 5$, $m\angle E = 4x - 15$, and $m\angle F = 2x + 10$. Which statement is true?

1) $DF = FE$
2) $DE = FE$
3) $m\angle E = m\angle F$
4) $m\angle D = m\angle F$