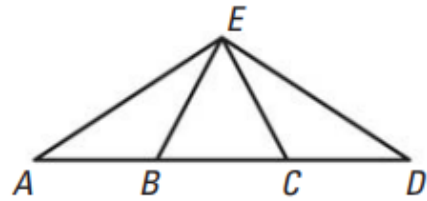
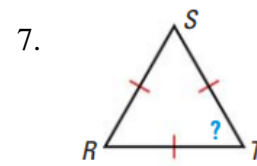
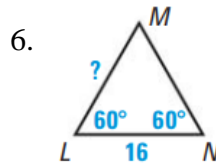
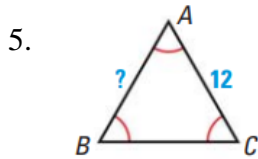


Complete the statement. Tell what theorem you used.

1. If $\overline{AE} \cong \overline{DE}$, then \angle _____ $\cong \angle$ _____
2. If $\overline{AB} \cong \overline{EB}$, then \angle _____ $\cong \angle$ _____
3. If $\angle D \cong \angle CED$, then _____ \cong _____
4. If $\angle EBC \cong \angle ECB$, then _____ \cong _____



Find the unknown measure.



8. A base angle in an isosceles triangle measures 37° . Draw and label the triangle (base, base angles, legs, vertex and angle measures). What is the measure of the vertex angle?

9. Describe and correct the error made in finding BC in the diagram shown.

$\angle A \cong \angle C$, therefore
 $\overline{AC} \cong \overline{BC}$. So,
 $BC = 6$

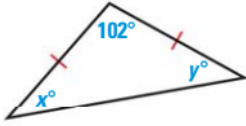
10. In $\triangle DEF$, $m\angle D = (4x + 2)^\circ$, $m\angle E = (6x - 30)^\circ$, and $m\angle F = 3x^\circ$. Classify $\triangle DEF$ by its sides and angles.

11. The measure of an exterior angle of an isosceles triangle is 130° . What are the possible angle measures of the triangle? **Explain your reasoning (draw a diagram(s) if you wish).**

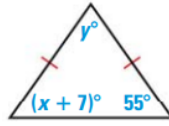
12. Let $\triangle PQR$ be an isosceles right triangle with hypotenuse \overline{QR} . Find the $m\angle P$, $m\angle Q$ and $m\angle R$.

Find the values of x and y .

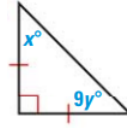
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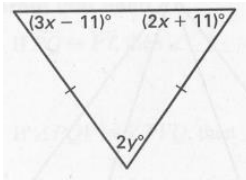
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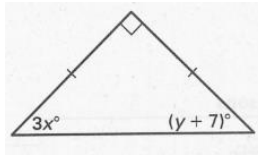
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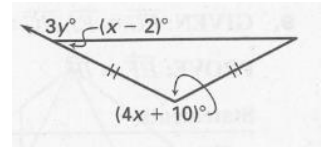
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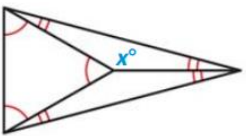
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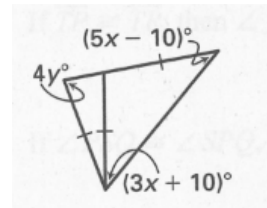
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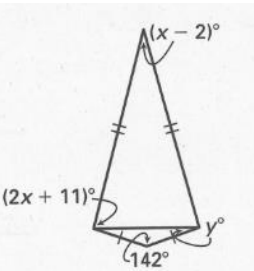
19.



20.



21.



22.

