

Review: Lines and Angles

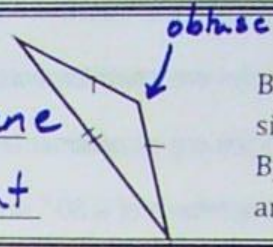
Notes: Identify each type of triangle by its angles and by its sides



By sides: equilateral
By angles: acute



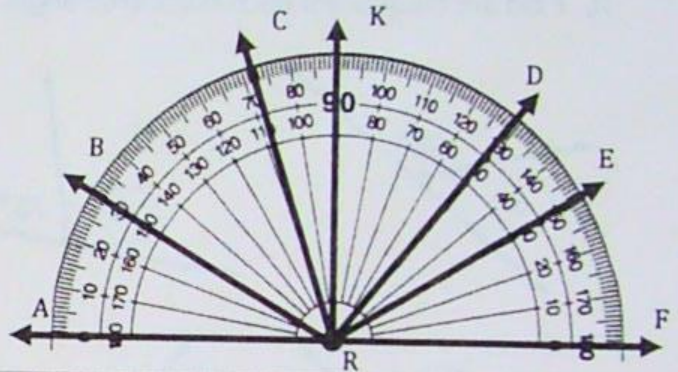
By sides: scalene
By angles: right



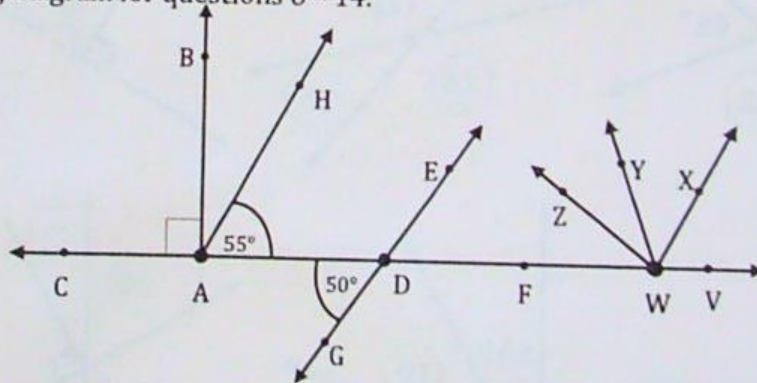
By sides: isosceles
By angles: obtuse

Part 1: Find the measure of the angles below.

- 1) What is the measure of $\angle DRA$? _____
- 2) What is the measure of $\angle CRF$? _____
- 3) What is the measure of $\angle ARB$? _____
- 4) What is the measure of $\angle CRB$? _____
- 5) What is the measure of $\angle KRC$? _____



Use the following diagram for questions 6 - 14.

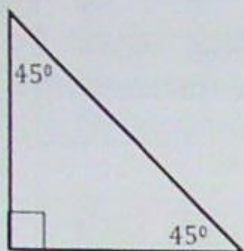


- 6) Which angle is supplementary angle to $\angle EDF$? _____
- 7) What is the measure of $\angle GDF$? _____
- 8) Which two angles are right angles? _____ and _____
- 9) What is the measure of $\angle EDF$? _____
- 10) Which angle is adjacent to $\angle BAD$? _____
- 11) Which angle is a complementary angle to $\angle HAD$? _____
- 12) What is the measure of $\angle HAB$? _____
- 13) What is the measure of $\angle CAD$? _____
- 14) Which angles are adjacent to $\angle EDA$? _____ and _____

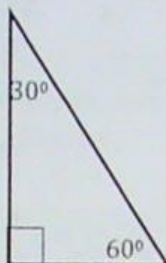
Interior Angles of a Triangle

FACT: The three interior angles of a triangle always add up to 180°.

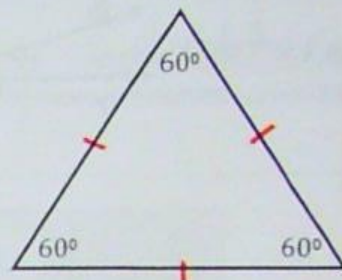
Example 1:



$$45^\circ + 45^\circ + 90^\circ = 180^\circ$$

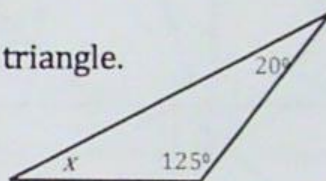


$$30^\circ + 60^\circ + 90^\circ = 180^\circ$$



$$60^\circ + 60^\circ + 60^\circ = 3(60^\circ) = 180^\circ$$

Example 2: Find the missing angle in the triangle.



Solution:

Step 1: Write equation. $20^\circ + 125^\circ + x = 180$

Step 2: Combine like terms. $145 + x = 180^\circ$

Step 3: Isolate x.
$$\begin{array}{r} 145^\circ + x = 180^\circ \\ -145 \quad -145 \end{array}$$

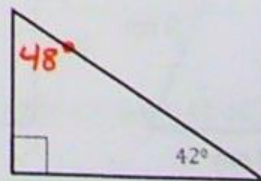
Step 4: State the solution. $x = 35^\circ$

Step 5: Use solution to answer the original question.

The missing angle is 35.

Example 3: Find the missing angle in the triangle.

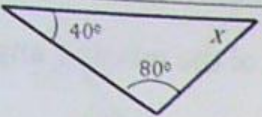
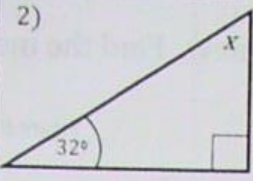
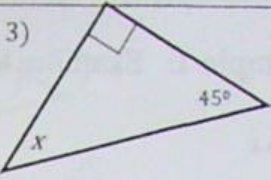
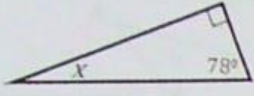
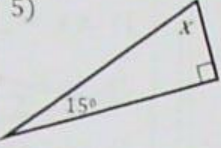
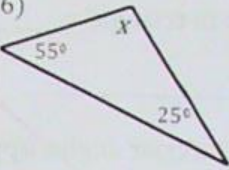
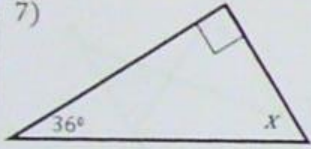
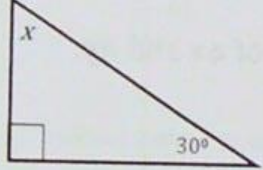
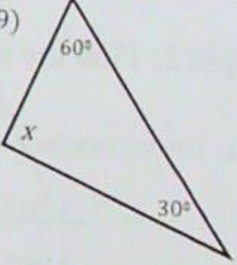
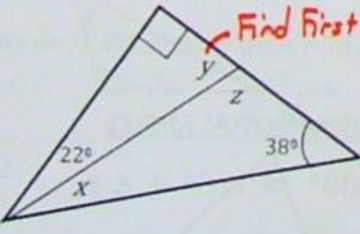
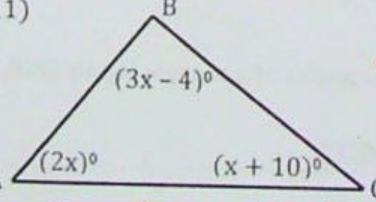
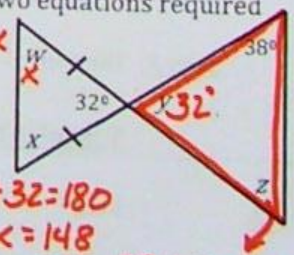
$$\begin{array}{r} 90 + 42 + x = 180 \\ 132 + x = 180 \\ -132 \quad -132 \\ \hline x = 48^\circ \end{array}$$



Note on #12 ... Given...

Independent Practice

Find the missing angle in the triangles. For each problem, show an equation and solve.

<p>1) </p>	<p>2) </p>	<p>3) </p>
<p>4) </p>	<p>5) </p>	<p>6) </p>
<p>7) </p>	<p>8) </p>	<p>9) </p>
<p>10) Two equations required</p>  <p><i>Find First</i></p> <p>y: _____ z: _____ x: _____</p>	<p>11) </p> <p>$2x + 3x - 4 + x + 10 = 180$</p> <p>A: _____ B: _____ C: _____</p>	<p>12) Two equations required</p>  <p>$2x + 32 = 180$ $2x = 148$ $x = 74$ w: <u>74</u> x: <u>74</u> y: <u>32</u> z: <u>110</u></p> <p>$38 + 32 + z = 180$ $70 + z = 180$ $z = 110$</p>