Triangles:

A. Definitions

isosceles triangle - A triangle that has at least two sides that are equivalent.

equilateral/equiangular triangle - A triangle that has all three sides equal and all 3
interior angles are 60 degrees.

acute - An acute angle is an angle that is less than 90 degrees. An acute triangle is
a triangle where all the angles are less than 90 degrees.

obtuse - An obtuse angle is an angle that is more than 90 degrees. An obtuse
triangle is a triangle where one angle is more than 90 degrees.

right - A right angle is an angle that is exactly 90 degrees. A right triangle is a
triangle where one angle is 90 degre es.

complement - The compliment of an angle is 90 minus the angle. In other words,
the two angles must equal a right angle.

supplement - The supplement of an angle is 180 minus the angle. In other words,
the two angles must add to be 180 degrees.

B. Basic Memorizations

General Triangles:

Area = $^1/_2$bh, where 'b' is the base and 'h' is the height

Perimeter = a+b+c, where 'a', ' b', and 'c' are the sides

Right Triangles:

Area = $^1/_2$ab, where 'a' and 'b' are the legs of the triangle

c = $\sqrt{a^2+b^2}$, where 'c' is the hypotenuse

Equilateral Triangles:

Area = $h^2\sqrt{3}/3$, where 'h' is the height

Area = $s^2\sqrt{3}/4$, where 's' is the side

C. Examples

    Ex [1] Find the area of an equilateral triangle with sides of 8cm.
            _____ cm^2.

        a. In this example you should use the formula $\dfrac{s^2 \sqrt{3}}{4}$

        b. $8^2 = 64$. $64 \div 4 = 16$.

        c. The answer is $16\sqrt{3}$.

    Ex [2] The complement of 76° is _____ degrees.

        a. The complement of an angle is the angle that when added to it is 90 degrees.

        b. Therefore, the answer is 90 - 76 = 14.

        c. The answer is 14.