Angles are geometric shapes formed by two rays that begin at the same point

How to measure angles using a protractor?

Types of Angles
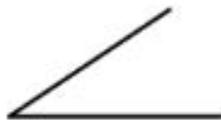
Acute angles equal
0-89 degrees.

Right angles equal
exactly 90 degrees.
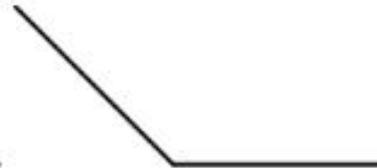
Obtuse angles equal
91-179 degrees.

Line up the bottom of the protractor with bottom line of the angle.
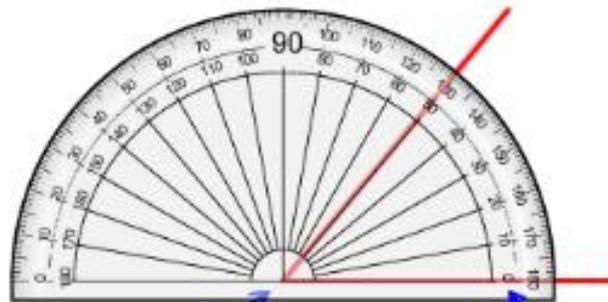
Don't forget to make
sure the vertex of the
angle is lined up with
the center of the
protractor.

Start at the zero
and read up.

Double check your measurment.
Does your answer match the type of angle you are measuring?

Area of a triangle.
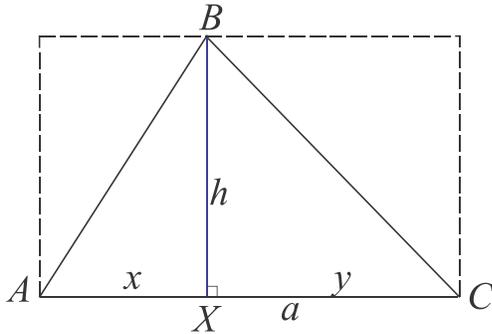
$$S_\Delta = \frac{1}{2} h \times a$$

The area of a triangle is equal to half of the product of its height and the base, corresponding to this height.

For the acute triangle it is easy to see.

$$S_\square = h \times a = x \times h + y \times h$$

$$S_{\Delta ABX} = \frac{1}{2} h \times x, \qquad S_{\Delta XBC} = \frac{1}{2} h \times y, \qquad S_{\Delta ABC} = S_{\Delta ABX} + S_{\Delta XBC}$$

$$S_{\Delta ABC} = \frac{1}{2} h \times x + \frac{1}{2} h \times y = \frac{1}{2} h(x + y) = \frac{1}{2} h \times a$$
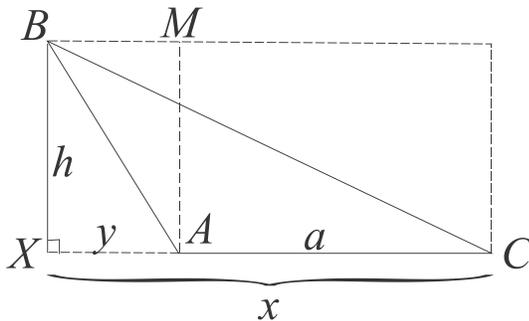
For an obtuse triangle, for one out of the three heights, it is not so obvious.

$$S_{\Delta XBC} = \frac{1}{2} h \times x, \qquad S_{\Delta XBA} = \frac{1}{2} h \times y$$

$$S_{\Delta ABC} = S_{\Delta XBC} - S_{\Delta XBA} = \frac{1}{2} h \times x - \frac{1}{2} h \times y$$

$$= \frac{1}{2} h \times (x - y) = \frac{1}{2} h \times a$$