How to measure Ford 9" axles

There are a couple of terms that are needed when measuring:

Total width-this is the total width of the assembled rear end measured from the outside of one axle flange to the outside of the other. Backing plate to backing plate means nothing when measuring for a rear end so forget about that way of measuring.

Housing width-is the total width of the housing from the outside of the housing on one side to the outside on the other.

Centered pinion- to have a centered pinion, the left axle has to be 4" shorter than the right axle in all cases.

Brake offset-this is the measurement from the outside of the axle flange to the edge of the bearing retainer plate that bolts to the housing. Large bearing 9" housings have a 2 3/8" brake offset, and small bearing 9" housings have a 2 1/2" brake offset. There are also others such as 2" and 2 1/4", but you better have the drums and backing plates that go with those offsets or you could be in trouble as far as finding brakes to fit.

Space between the axles- this is the space between the left and right axles when the axles are bolted in the housing, which is 1.125" for all 9" rears whether you have a locker, spool, posi or open diff.

So lets figure out the axle lengths on a 58" total width big bearing 9".

First we divide the 58" total width by 2.
58/2= 29

Next we subtract half of 1.125(space between the axles) from 29".
29"-.562"= 28.438"

Now we take 28.438", and because the right side axle is longer, we add 2" to that length.
28.438"+2"=30.438"

Our right side axle length is 30.438"

We do the same with the left axle, except we subtract 2" from the length.
28.438"-2" = 26.438"

Our right side axle length is 26.438".

We can check to see if everything is correct by adding everyting together.
30.438"-right side axle length
26.438"-left side axle length
+ 1.125"-space between the axles

=58"- which was our total width to start with

We can figure the housing width by taking the total width and subtracting the brake offset x 2.

The housing is a big bearing housing, so the brake offset is 2 3/8".
We need to subtract the brake offset from each side, so we multiply times two.

2 3/8" x 2 = 4.750"

58"-total rear end width
- 4.750"-brake offset x 2
=53.750"-housing width

You can use these formulas to figure your axle lengths and housing widths as long as you know the total width.