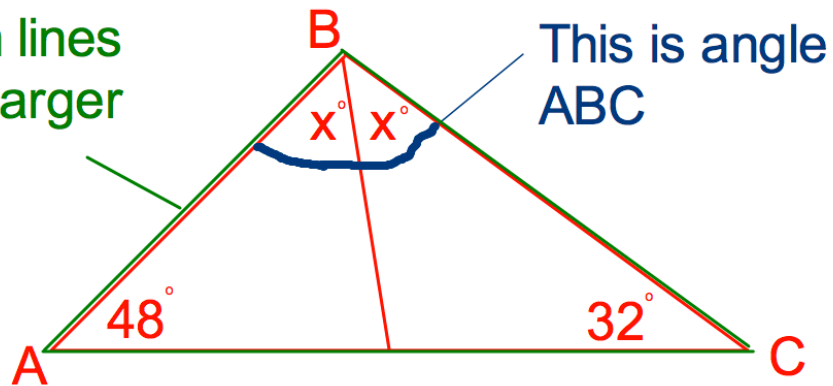


Geometry Test 1
Problem 17

This problem involved using the triangle theorem that says “All three angles of any triangle will add together to give 180” (this is a paraphrase of the Triangle Sum Theorem, page 66)

The problem asks us to find $\angle ABC$, but $\angle ABC$ is made up of “ x ” plus “ x ”. So we first have to find what “ x ” equals.

The green lines show the larger triangle



Even though there are two little triangles in that figure, they form a larger triangle, Triangle ABC

Using the Triangle Sum Theorem, we know that $48 + x + x + 32$ should equal 180

So we add that together

$$48 + 2x + 32 = 180$$

$$32 + 48 = 80$$

$$80 + 2x = 180$$

$$2x = 180 - 80$$

$$2x = 100$$

$$x = 100/2 = 50$$

Therefore, since $\angle ABC = x + x$, and $x = 50$, $\angle ABC = 50 + 50 = 100$