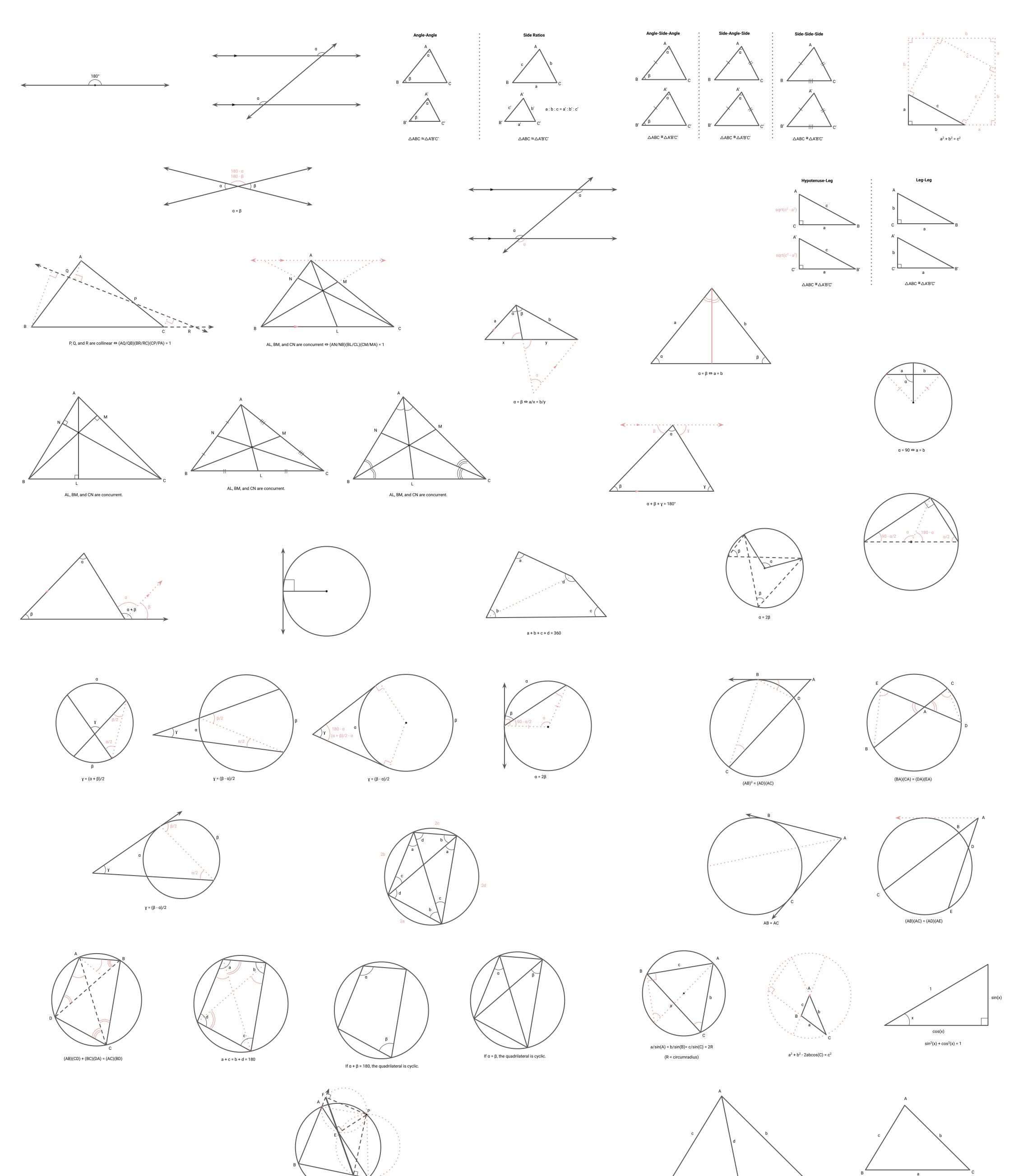
## The Royal Road to Geometry



D, E, and F are collinear  $\Leftrightarrow$  P is on the circumcircle of  $\triangle$ ABC.

[ABC] = sqrt(s(s-a)(s-b)(s-c))

(s = semiperimeter)

 $c^2n + b^2m = d^2a + mna$