Shifting the Origin in Case of Complex Numbers.

Let O be the origin and P be a point with affix z_0 . Let a point Q has affix z with respect to the co-ordinate system passing through O.

When origin is shifted to the point $P(z_0)$ then the new affix Z of the point Q with respect to new origin P is given by $Z = z - z_0$ i.e., to shift the origin at z_0 we should replace z by $Z + z_0$.

