



الرسم المعماري

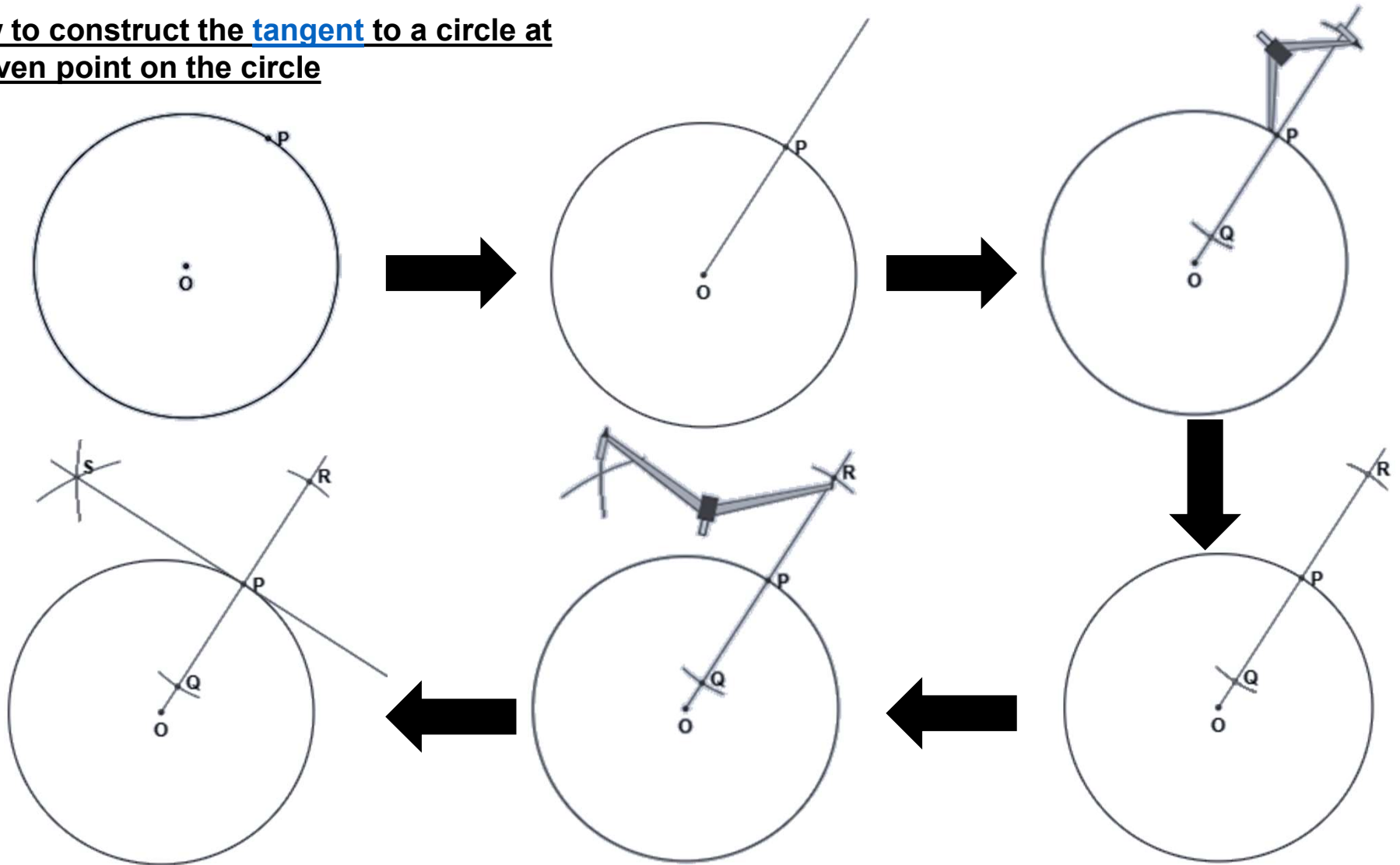
المرحلة الاولى

د. عامر حبيب السوداني

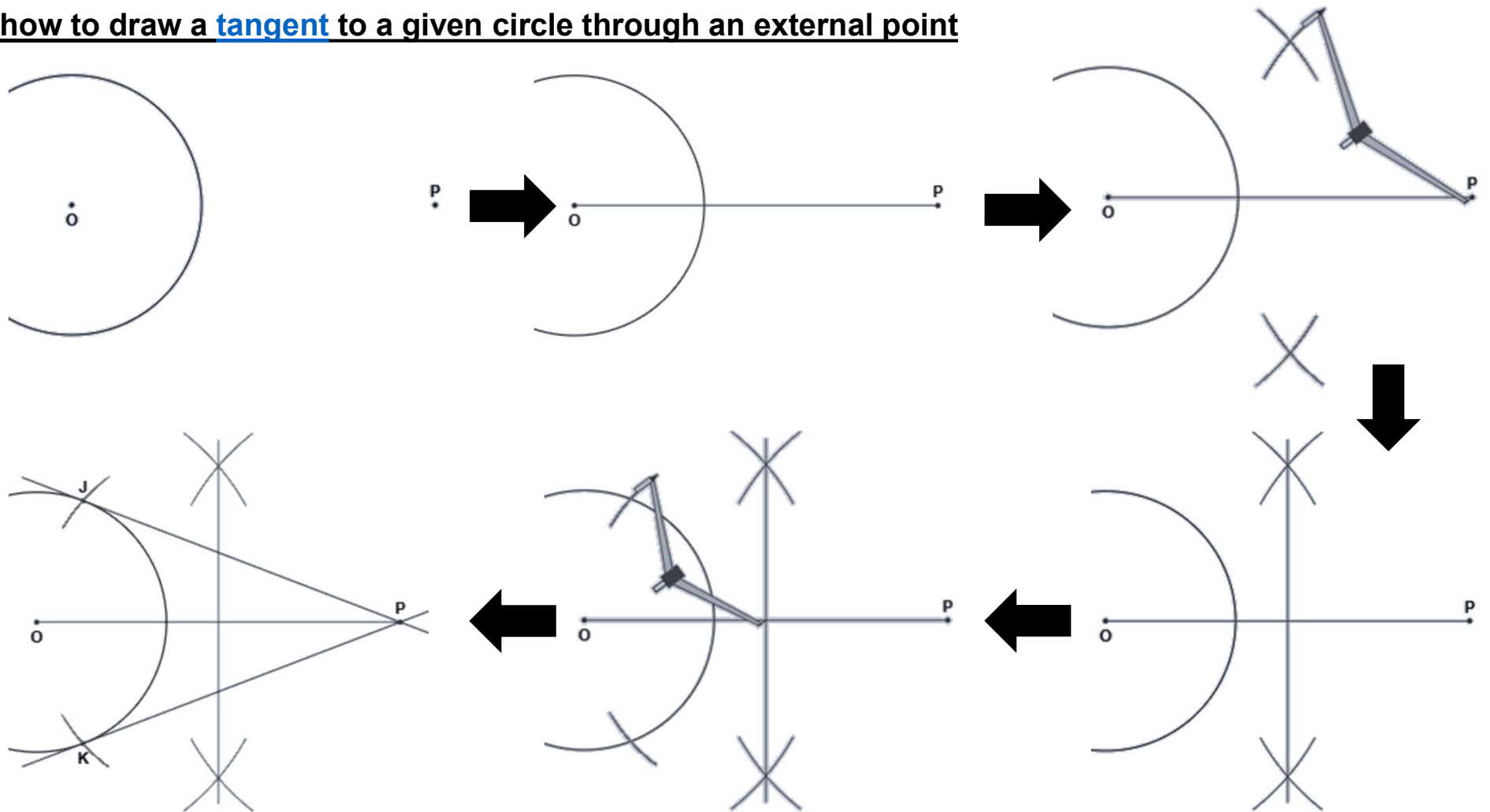
عمليات الانشاء الهندسي 3

Geometry Construction 3

how to construct the **tangent** to a circle at a given point on the circle

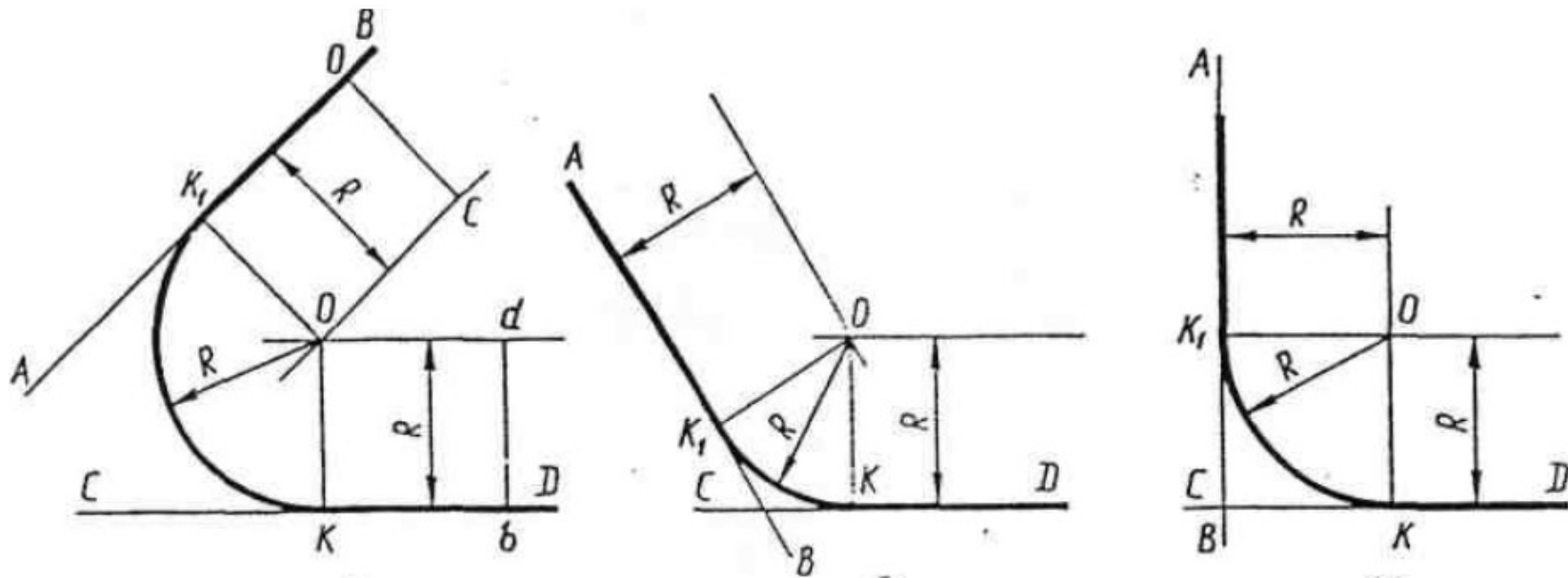


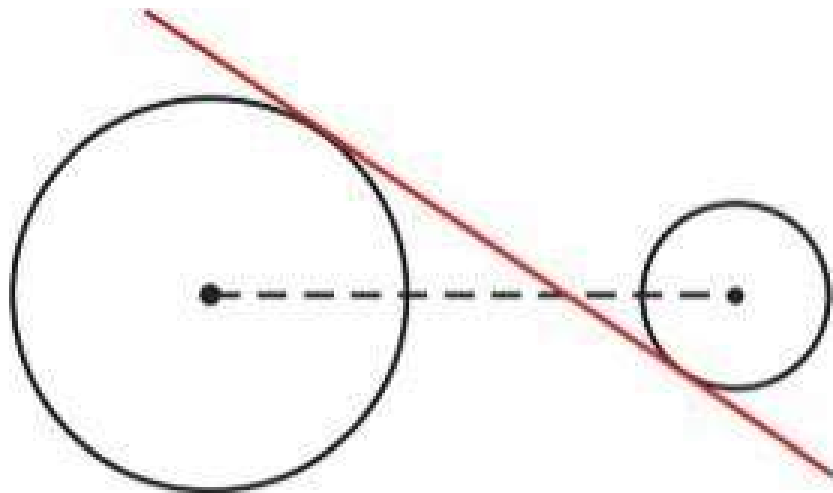
how to draw a **tangent** to a given circle through an external point



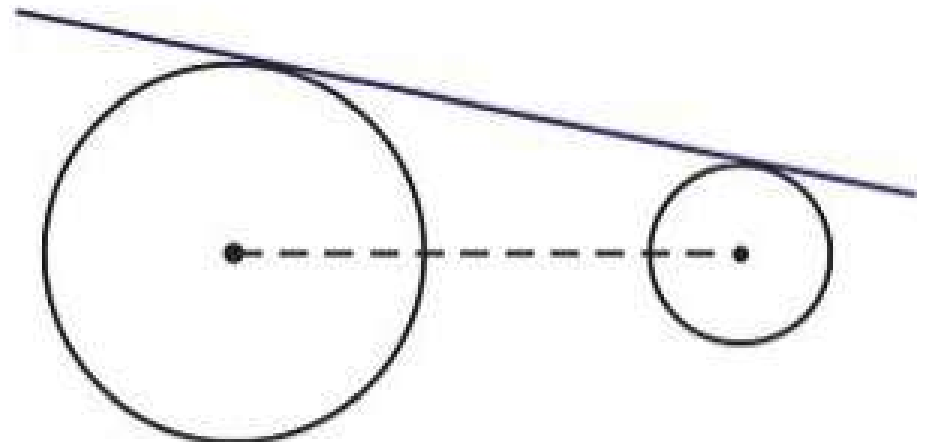
To draw an arc of given radius tangent to two lines, follow these steps.

لرسم قوس بنصف قطر معلوم و يكون مماس لخطين متعامدين او غير متعامدين

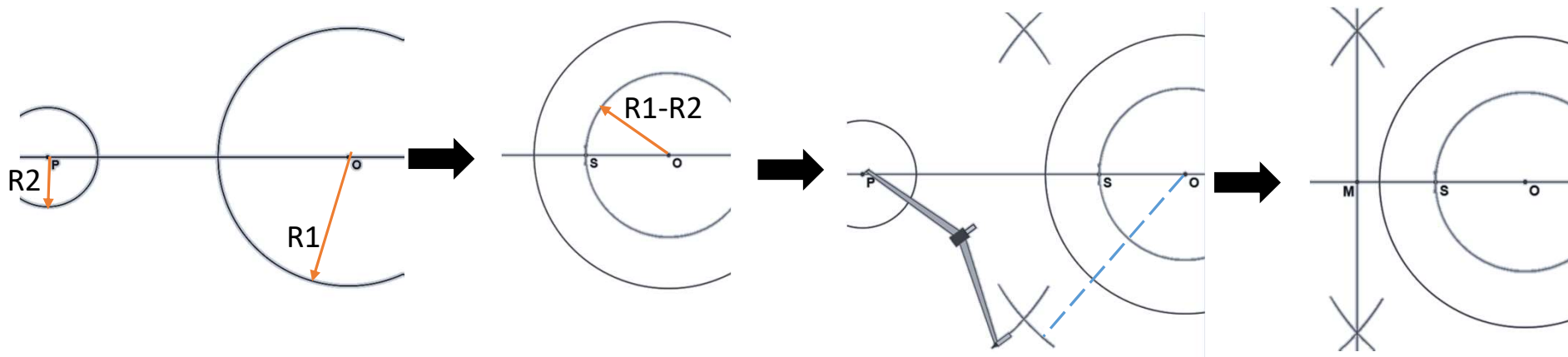




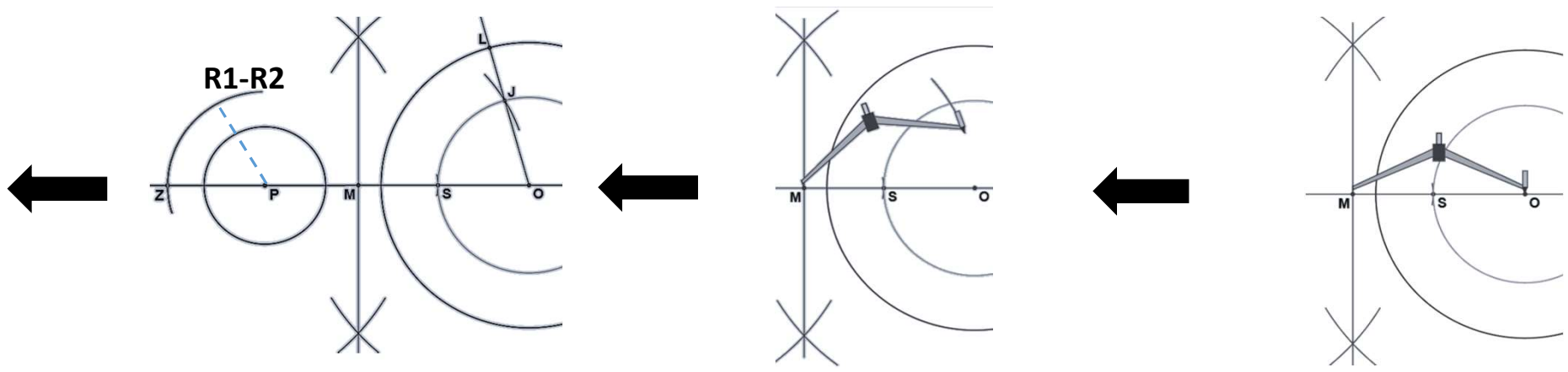
common internal tangent

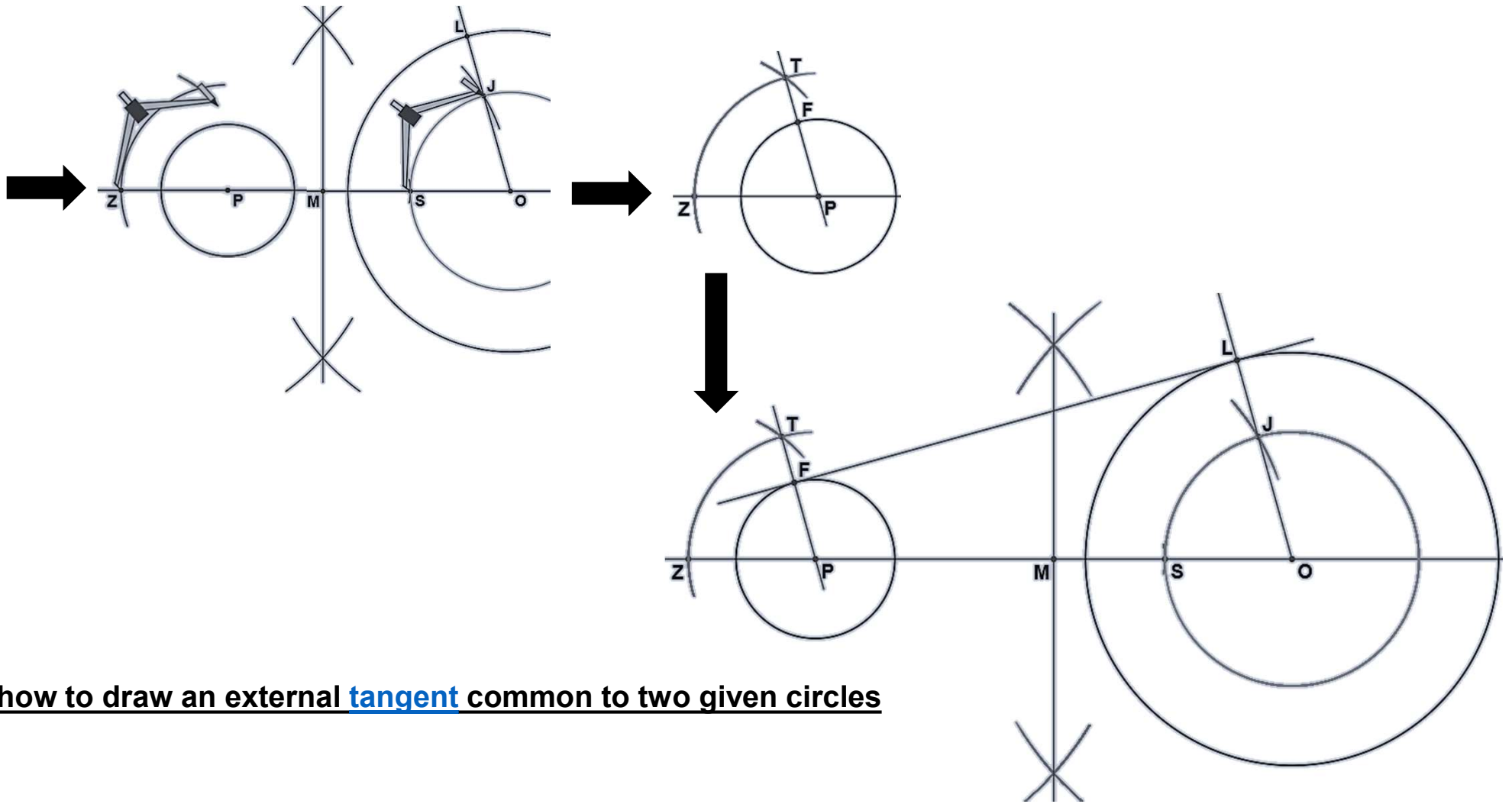


common external tangent

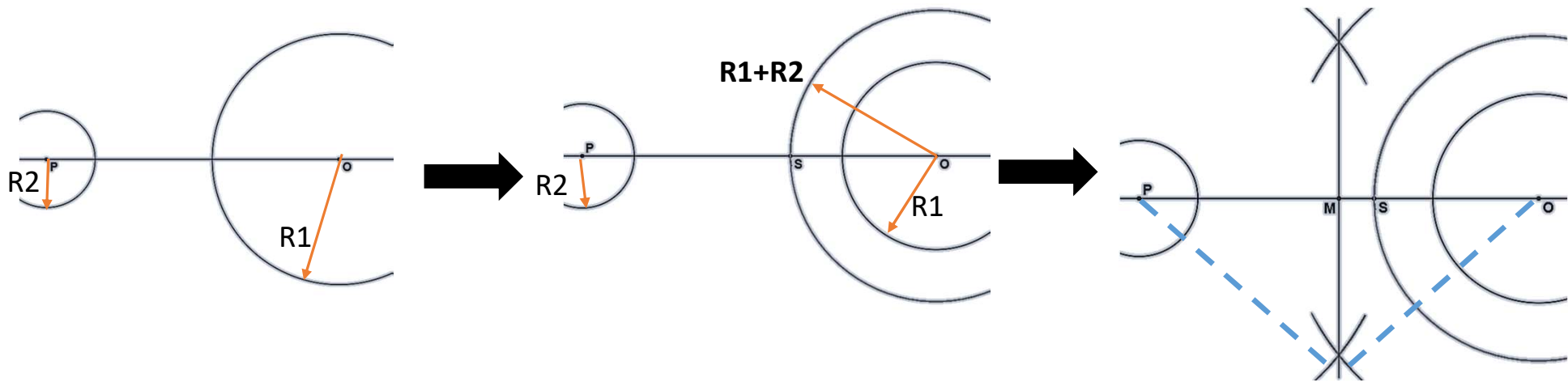


how to draw an external [tangent](#) common to two given circles

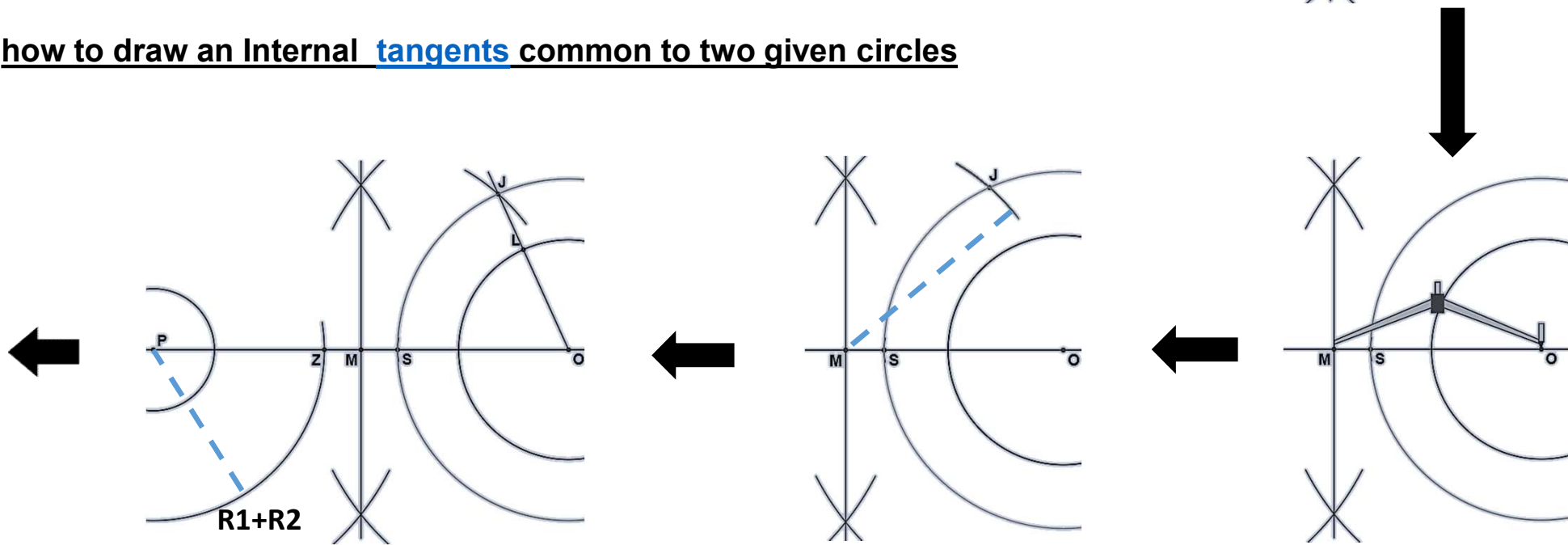




how to draw an external [tangent](#) common to two given circles

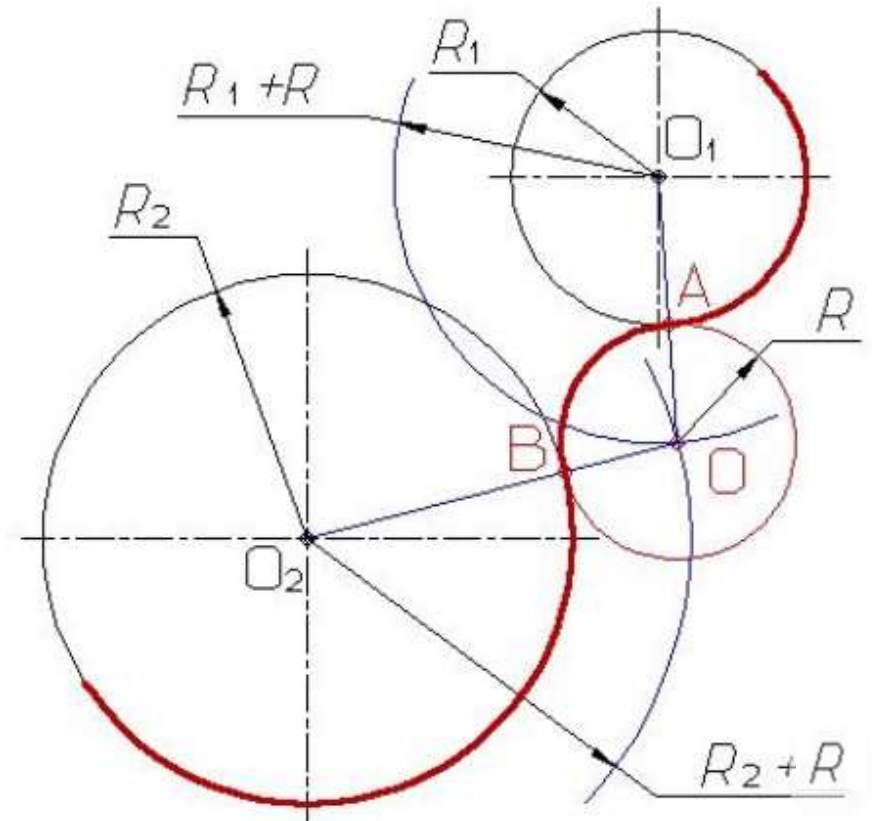
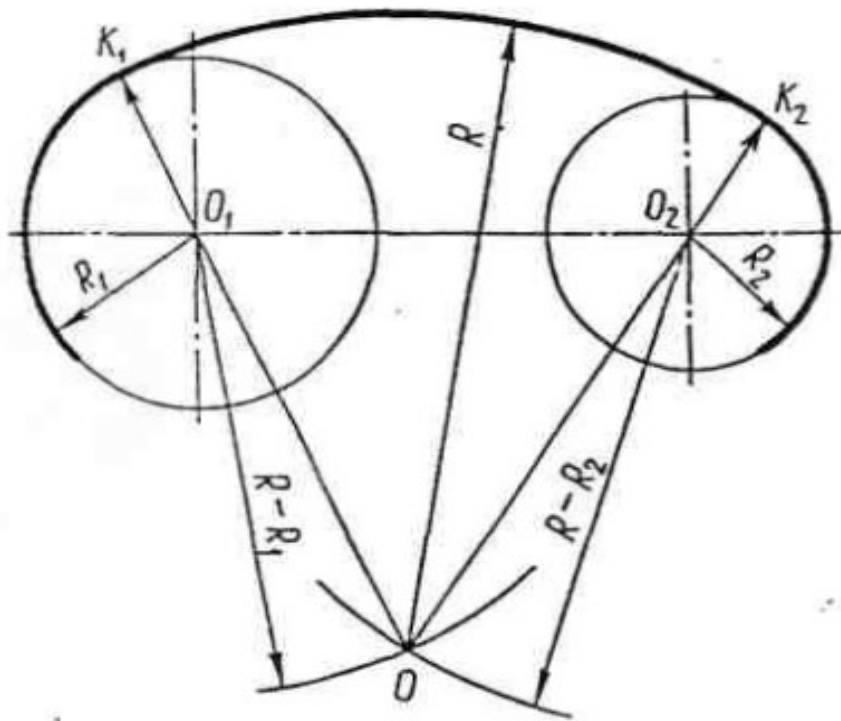


how to draw an Internal [tangents](#) common to two given circles



To draw an arc of given radius tangent to two circles, follow these steps.

لرسم قوس بنصف قطر معلوم و يكون مماس لدائرتين



To draw an arc of given radius tangent to two circles, follow these steps.

لرسم قوس بنصف قطر معلوم و يكون مماس لدائرتين

