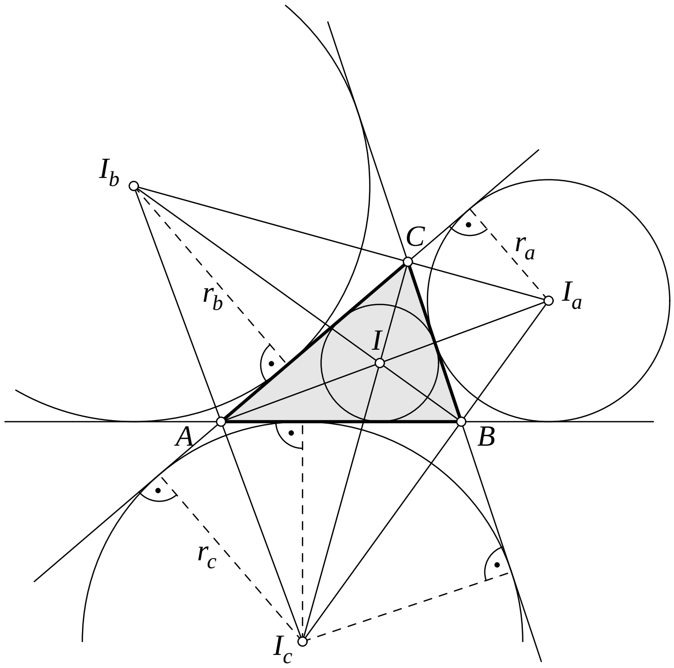
T.1.5 Formeln – Ankreismittelpunkte



$$r_a = \frac{rs}{s-a} = s\tan\frac{\alpha}{2} = \sqrt{\frac{s(s-b)(s-c)}{s-a}},$$

$$r_b = \frac{rs}{s-b} = s\tan\frac{\beta}{2} = \sqrt{\frac{s(s-c)(s-a)}{s-b}},$$

$$r_c = \frac{rs}{s-c} = s\tan\frac{\gamma}{2} = \sqrt{\frac{s(s-a)(s-b)}{s-c}},$$

$$r_a + r_b + r_c = 4R + r,$$

$$r_b r_c + r_c r_a + r_a r_b = s^2,$$

$$r_a r_b r_c = \frac{\Delta^2}{r},$$

$$r_a^2 + r_b^2 + r_c^2 = 16R^2 - r^2 - (a^2 + b^2 + c^2),$$

$$\frac{1}{r_b} + \frac{1}{r_c} = \frac{2}{h_a}, \qquad \frac{1}{r_c} + \frac{1}{r_a} = \frac{2}{h_b}, \qquad \frac{1}{r_a} + \frac{1}{r_b} = \frac{2}{h_c},$$

$$\frac{1}{r_a} + \frac{1}{r_b} + \frac{1}{r_c} = \frac{1}{r} = \frac{1}{h_a} + \frac{1}{h_b} + \frac{1}{h_c}.$$

(Wird fortgesetzt.)