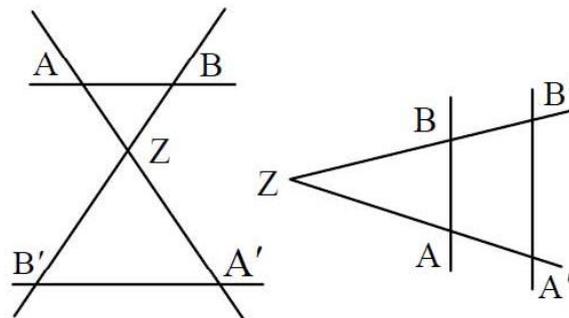




Strahlensätze

$$AB \parallel A'B' \Leftrightarrow \frac{\overline{ZA}}{\overline{ZA'}} = \frac{\overline{ZB}}{\overline{ZB'}}; \frac{\overline{ZA}}{\overline{AA'}} = \frac{\overline{ZB}}{\overline{BB'}}$$

$$AB \parallel A'B' \Rightarrow \frac{\overline{AB}}{\overline{A'B'}} = \frac{\overline{ZA}}{\overline{ZA'}}$$



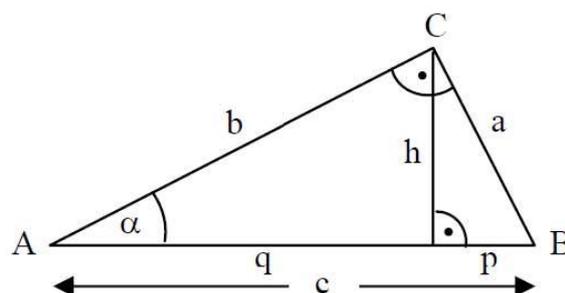
Rechtwinkliges Dreieck

Pythagoras: $a^2 + b^2 = c^2$

Höhensatz: $h^2 = pq$

Kathetensatz: $a^2 = cp$; $b^2 = cq$

$$\sin \alpha = \frac{a}{c}; \quad \cos \alpha = \frac{b}{c}; \quad \tan \alpha = \frac{\sin \alpha}{\cos \alpha} = \frac{a}{b}$$



Allgemeines Dreieck

Sinussatz: $a : b : c = \sin \alpha : \sin \beta : \sin \gamma$

Kosinussatz:

$$a^2 = b^2 + c^2 - 2bc \cos \alpha; \quad b^2 = a^2 + c^2 - 2ac \cos \beta; \quad c^2 = a^2 + b^2 - 2ab \cos \gamma$$

Kreis

Umfang: $U = 2\pi r$

Flächeninhalt: $A = \pi r^2$

Kreis Sektor: $A_{\text{Sektor}} = \frac{\alpha}{360^\circ} \pi r^2$

Kreisbogen: $b = \frac{\alpha}{360^\circ} 2\pi r$

Kreisring: $A_{\text{Ring}} = \pi(R^2 - r^2)$

