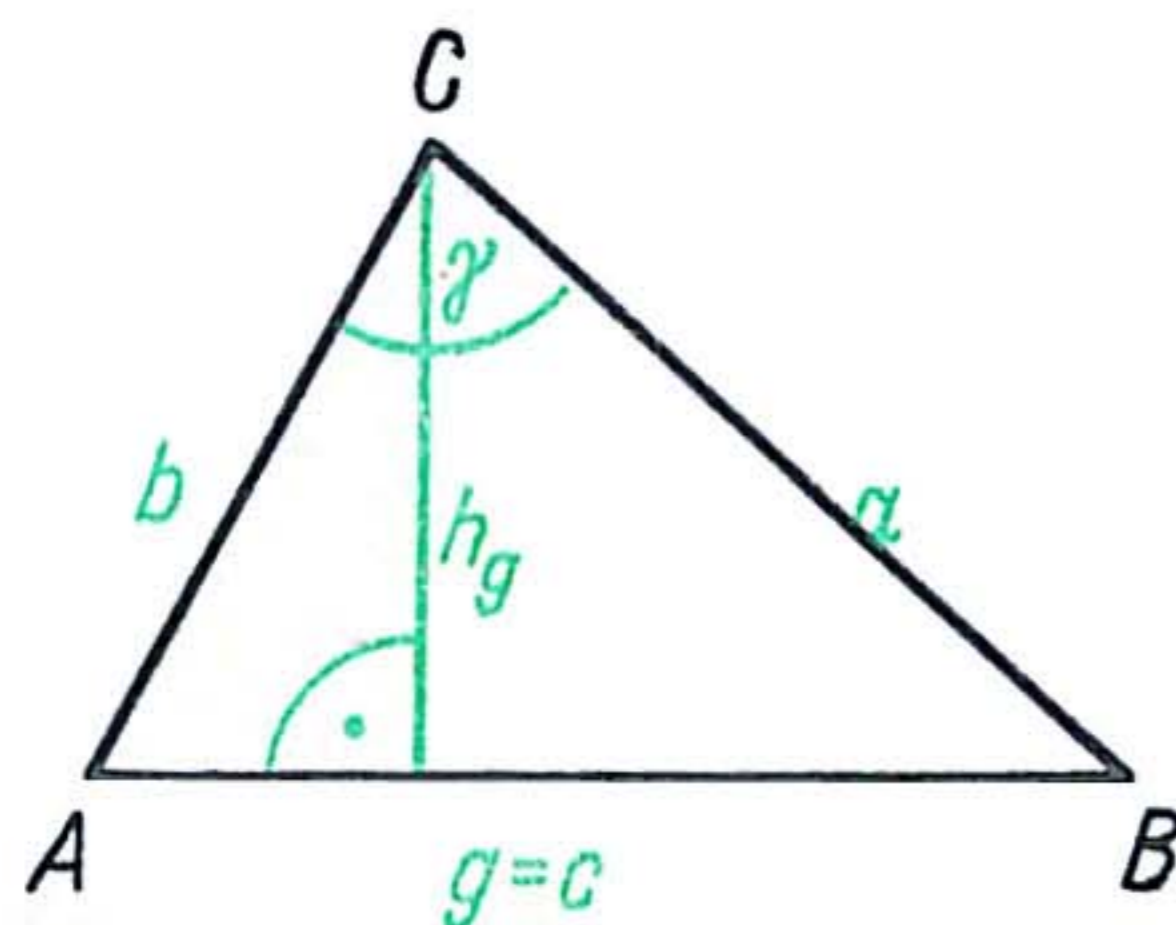


Ebene Figuren

Dreieck



$$A = \frac{g h_g}{2} = \frac{1}{2} ab \sin \gamma$$

$$u = a + b + c$$

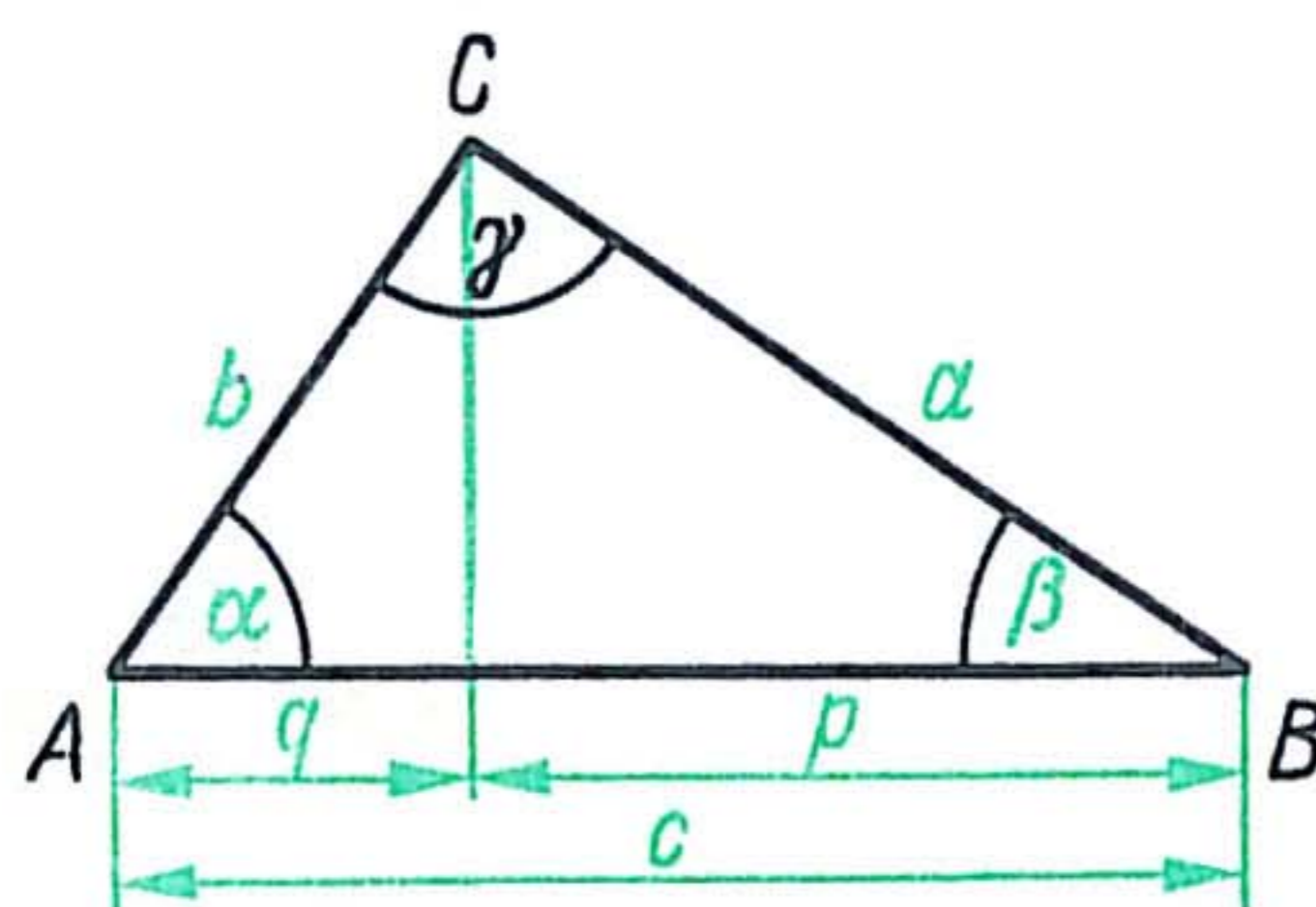
$$h_a : h_b = \frac{1}{a} : \frac{1}{b}$$

$$\frac{a}{\sin \alpha} = \frac{b}{\sin \beta} = \frac{c}{\sin \gamma}$$

$$c^2 = a^2 + b^2 - 2 ab \cos \gamma$$

Rechtwinkliges Dreieck

(γ sei 90°)



$$A = \frac{ab}{2}$$

$$u = a + b + c$$

$$h^2 = pq \text{ (Höhensatz)}$$

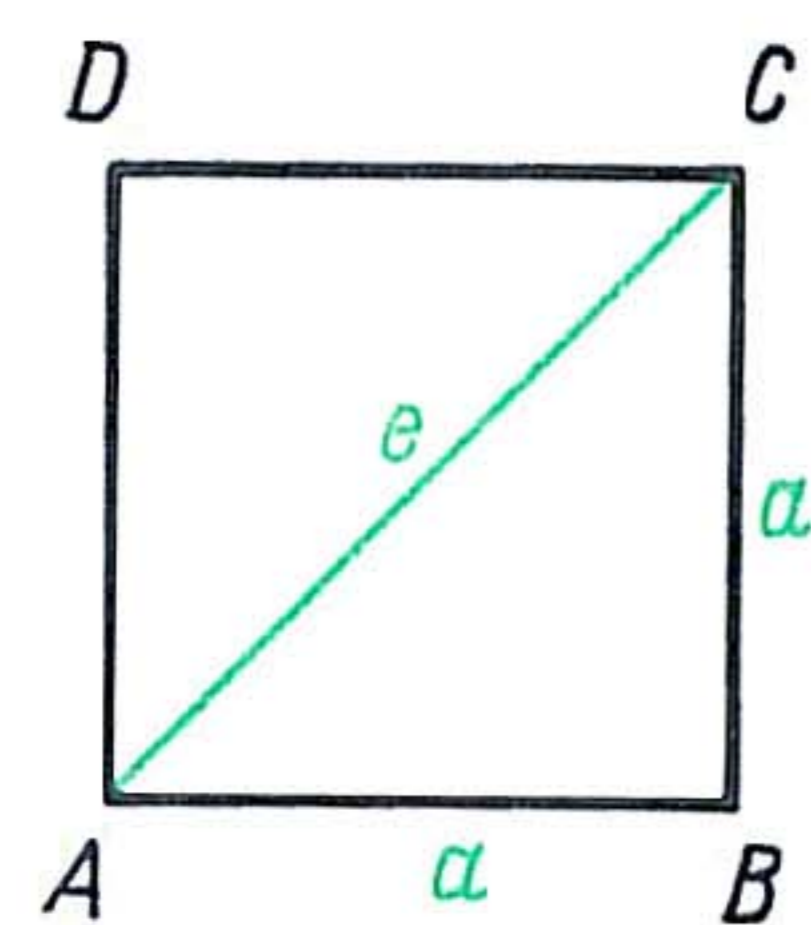
$$a^2 = pc; b^2 = qc \text{ (Kathetensatz)}$$

$$a^2 + b^2 = c^2 \text{ (Satz des Pythagoras)}$$

$$\sin \alpha = \cos \beta = \frac{a}{c}$$

$$\tan \alpha = \cot \beta = \frac{a}{b}$$

Quadrat

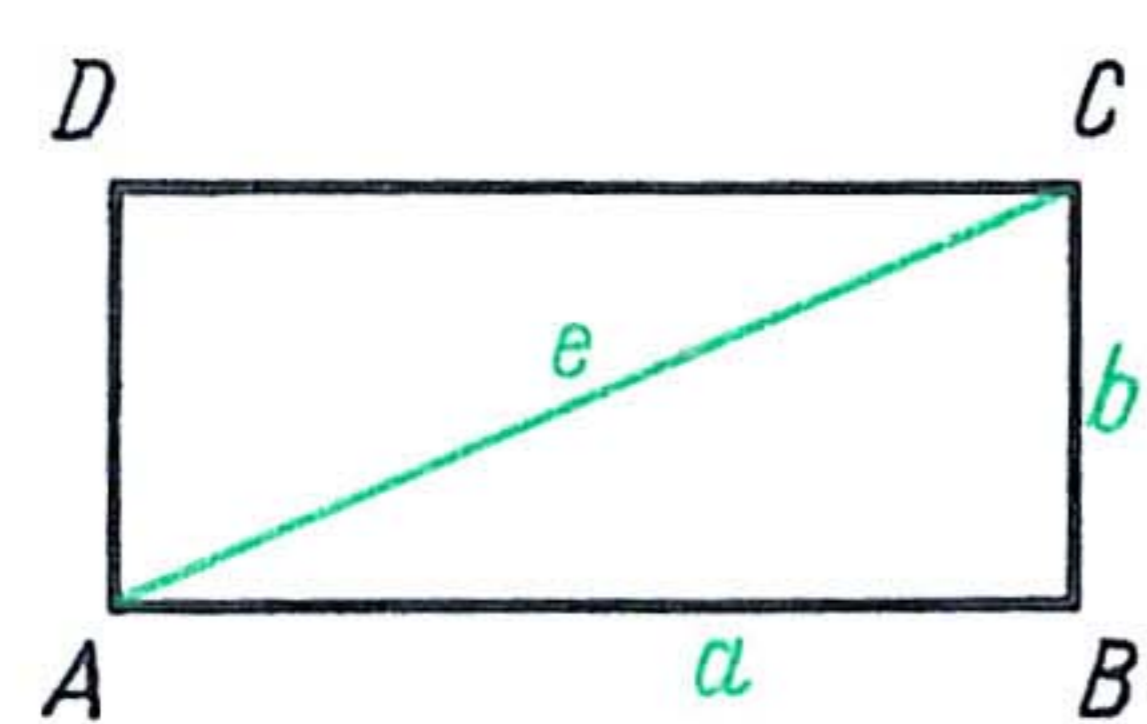


$$A = a^2$$

$$u = 4a$$

$$e = a\sqrt{2}$$

Rechteck



$$A = ab$$

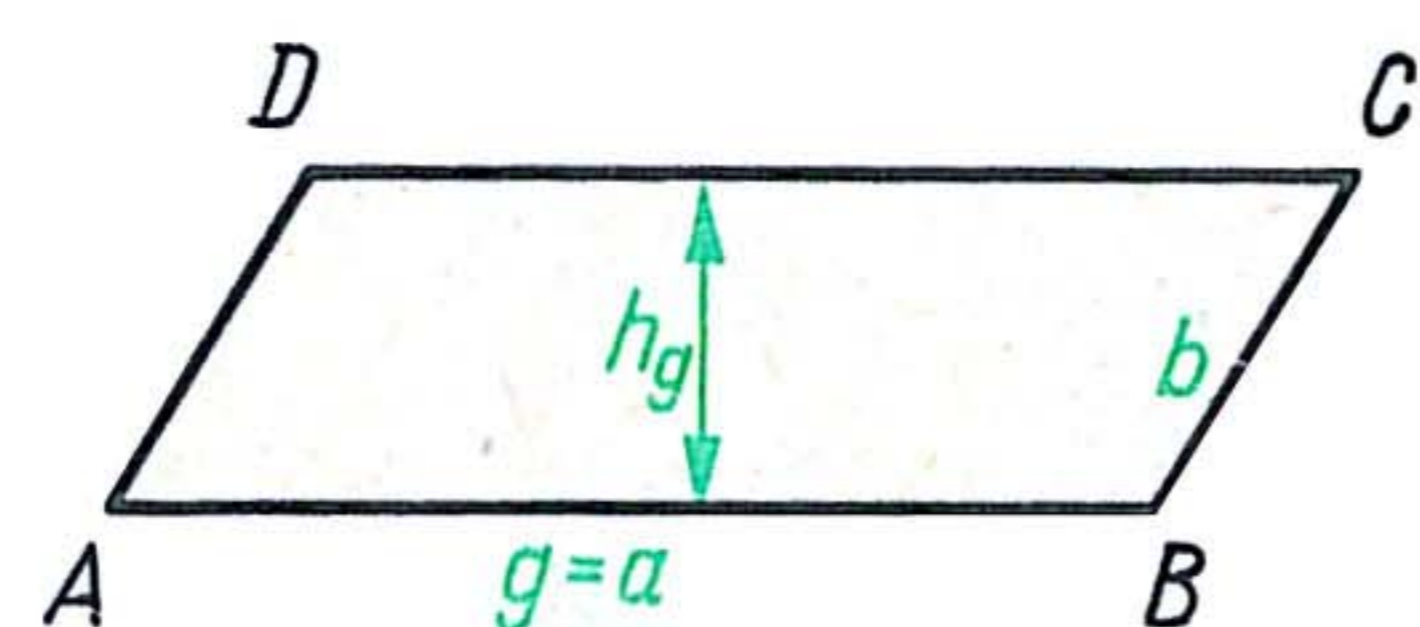
$$u = 2(a + b)$$

$$e = \sqrt{a^2 + b^2}$$

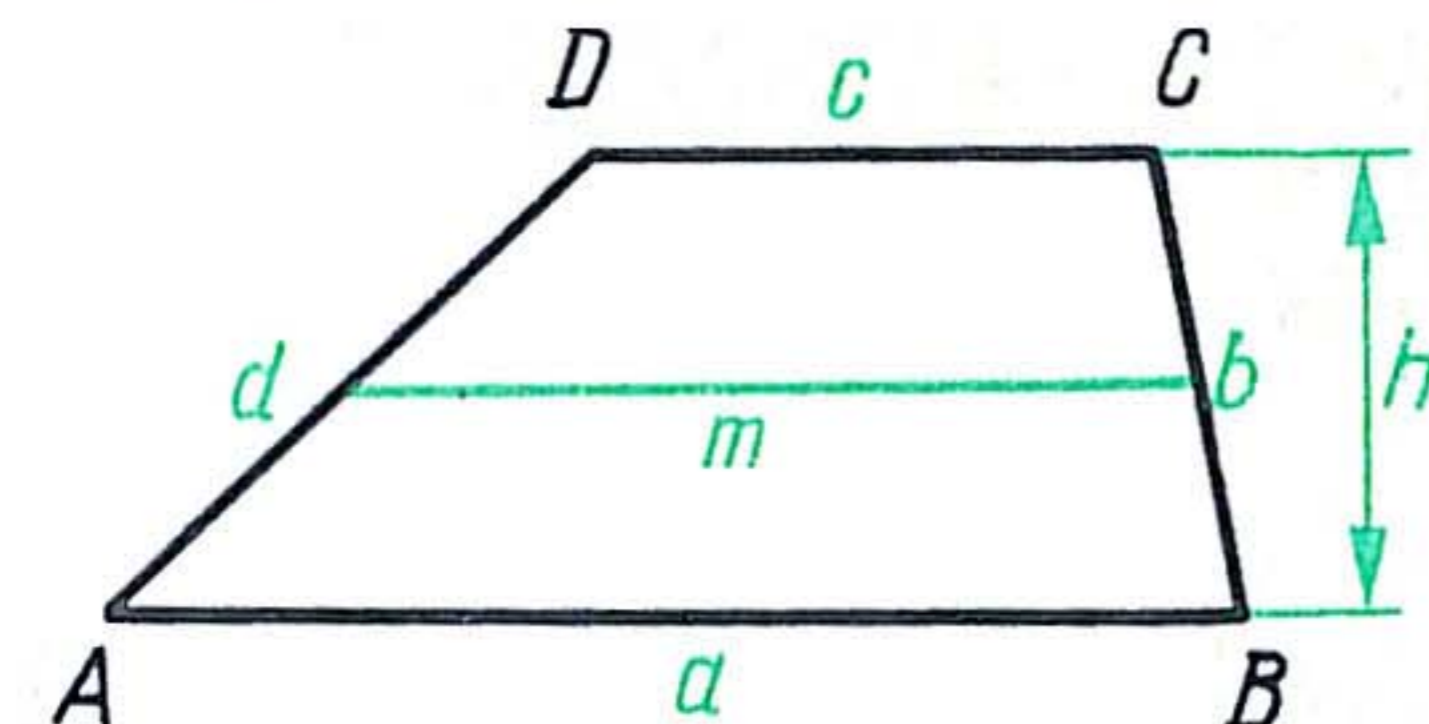
Parallelogramm

$$A = gh_g$$

$$u = 2(g + b)$$



Trapez



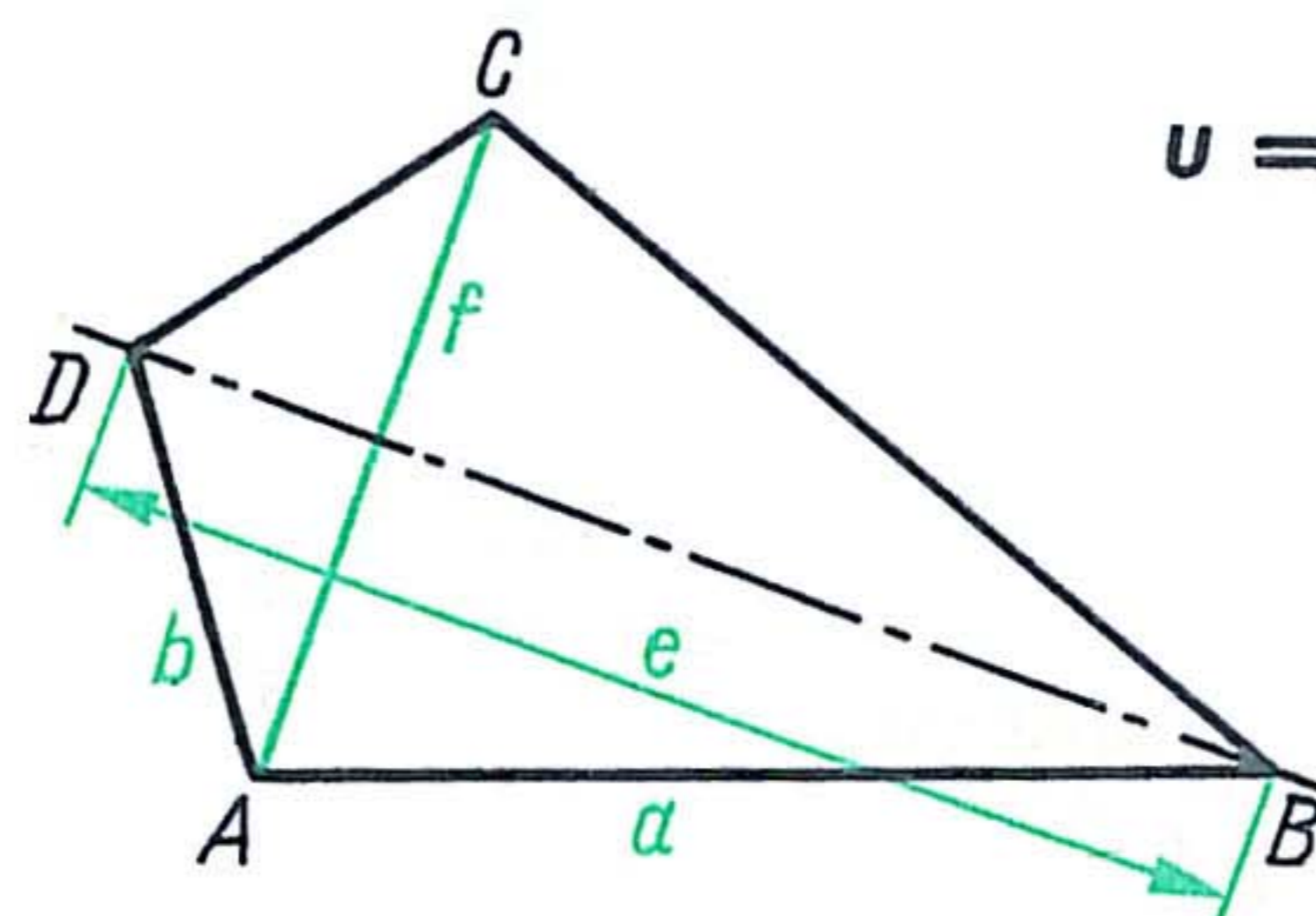
$$A = \frac{a + c}{2} h$$

$$= mh$$

$$u = a + b + c + d$$

A Flächeninhalt u Umfang

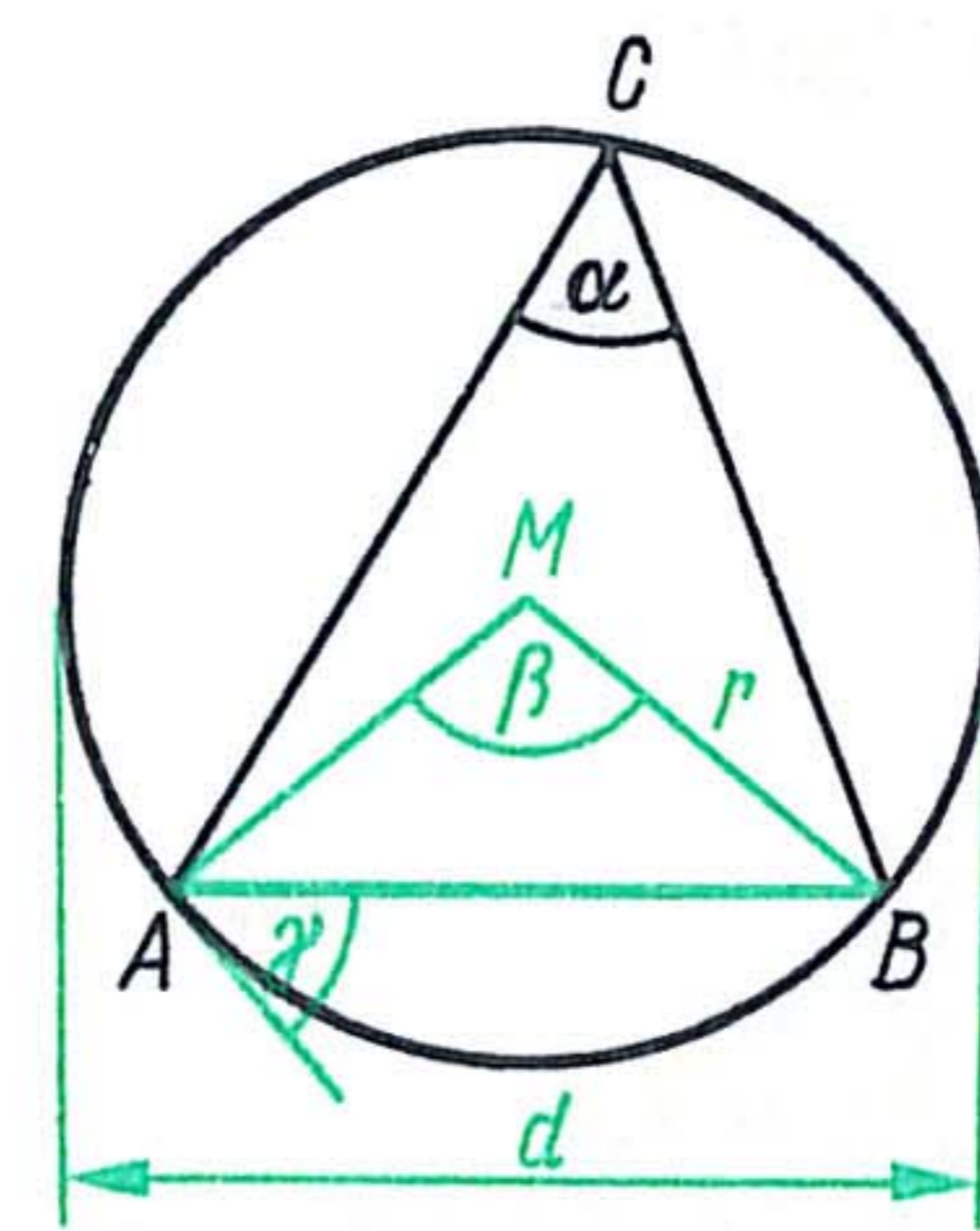
Drachenviereck



$$A = \frac{1}{2} ef$$

$$u = 2(a + b)$$

Kreis



$$A = \pi r^2 \text{ (} \nearrow 14, 15)$$

$$= \frac{\pi}{4} d^2$$

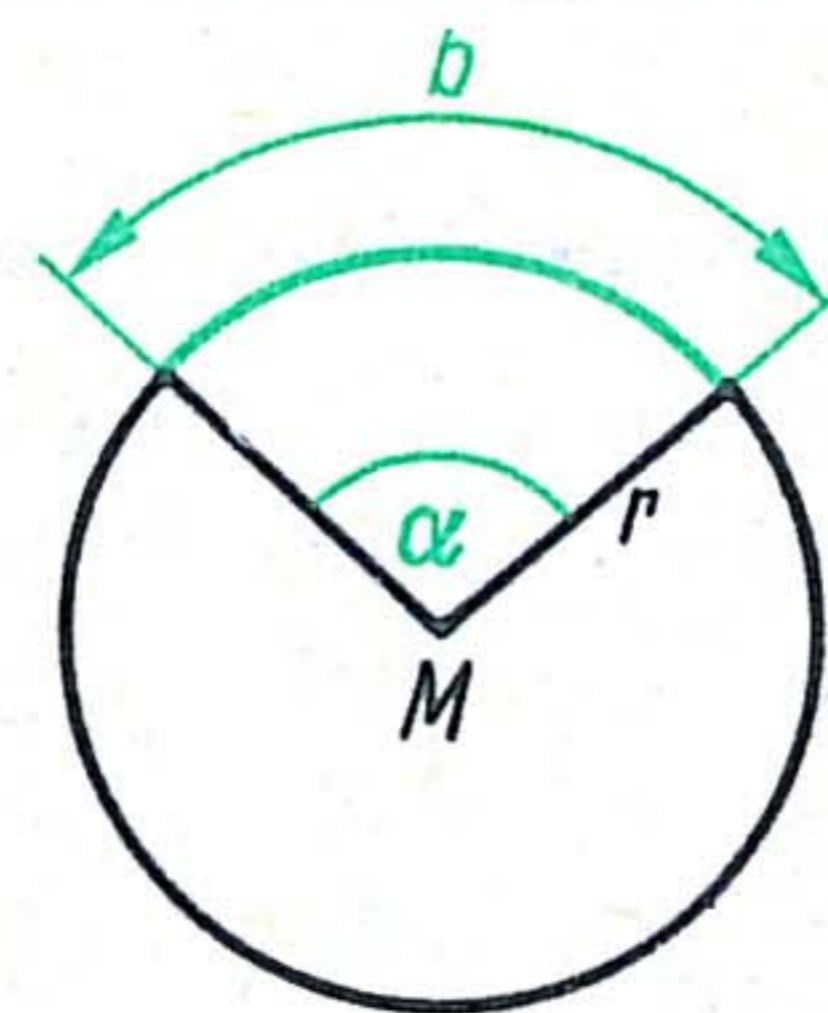
$$u = 2\pi r \text{ (} \nearrow 12, 13)$$

$$= \pi d$$

α Peripheriewinkel
 β Zentriwinkel
 (über der Sehne \overline{AB})
 γ Sehnentangentenwinkel

$$\alpha = \gamma; \alpha = \frac{\beta}{2}$$

Kreisbogen

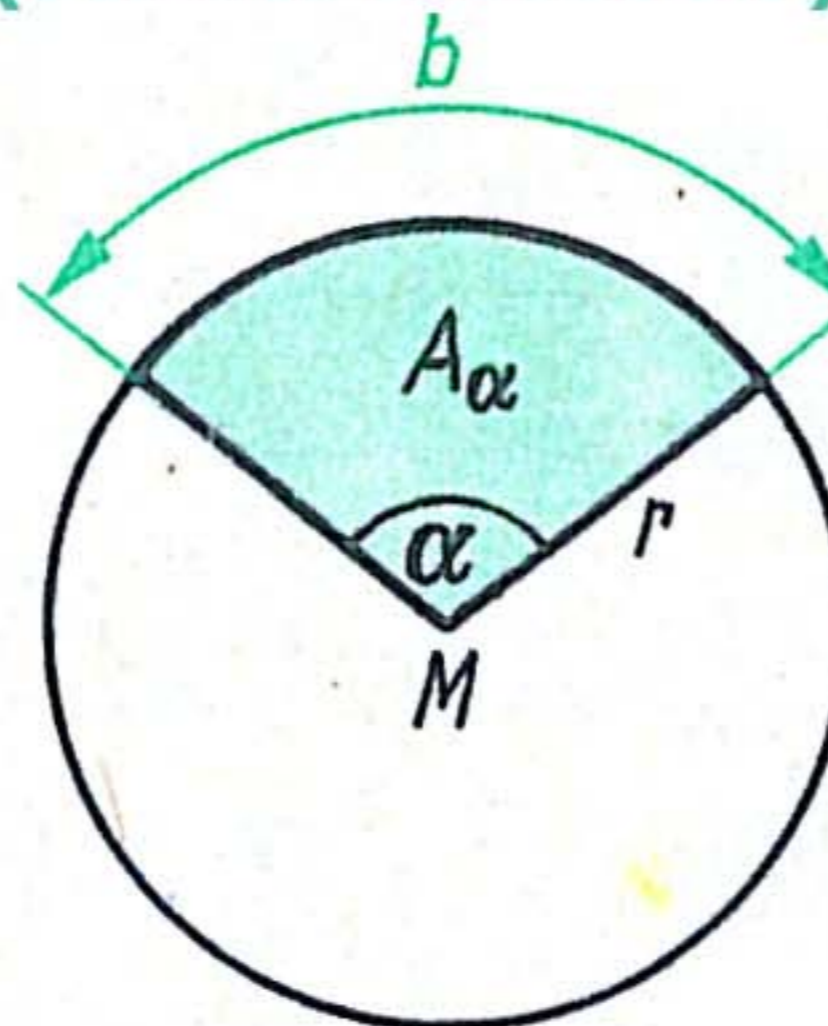


$$\frac{b}{u} = \frac{\alpha}{360^\circ}$$

$$b = r \cdot \text{arc } \alpha$$

$$= r \frac{\alpha \cdot \pi}{180^\circ} \text{ (} \nearrow 29)$$

Kreisausschnitt (Kreissektor)



$$\frac{A_\alpha}{A} = \frac{\alpha}{360^\circ}$$

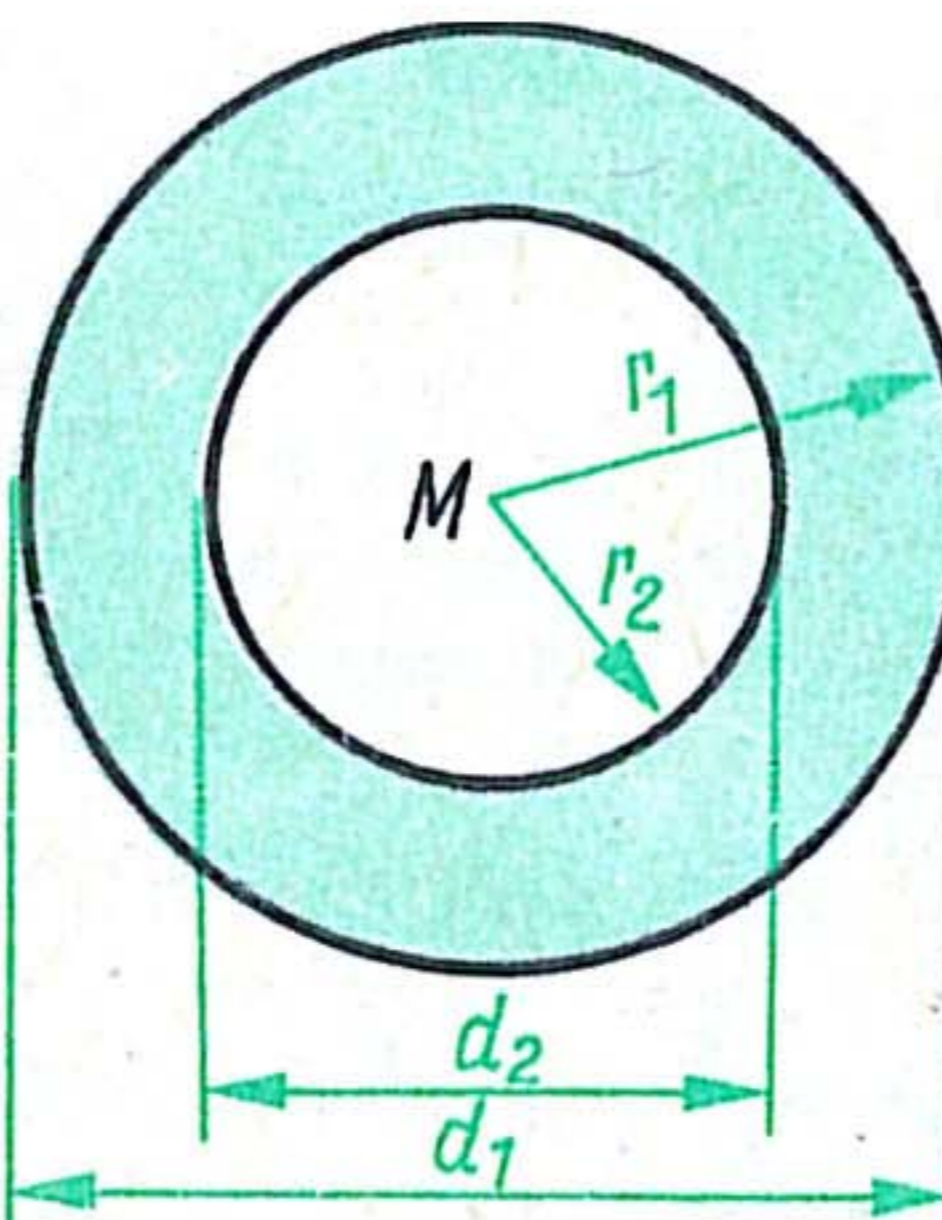
$$A_\alpha = \frac{1}{2} br$$

$$= \frac{1}{4} bd$$

$$u = 2r + b$$

$$= d + b$$

Kreisring



$$A = \pi (r_1^2 - r_2^2),$$

falls $r_1 > r_2$

$$A = \frac{\pi}{4} (d_1^2 - d_2^2)$$

$$= \frac{\pi}{4} (d_1 + d_2)(d_1 - d_2),$$

falls $d_1 > d_2$