

Kreisbogen / Flächeninhalt des Kreisausschnitts

Länge des Kreisbogens

$$b(\alpha) = 2\pi r \cdot \frac{\alpha}{360^\circ}$$

Flächeninhalt des Kreisausschnitts

$$A = \pi r^2 \cdot \frac{\alpha}{360^\circ}$$

1. $r = 4\text{cm}$
 $\alpha = 60^\circ$
 $b = ?$
 $A = ?$

2. $A = 10\text{ m}^2$
 $r = 3\text{ m}$
 $b = ?$
 $\alpha = ?$

3. $b = ?$
 $r = 5,5\text{cm}$
 $A = ?$
 $\alpha = 40^\circ$

4. $b = ?$
 $r = 4\text{ cm}$
 $A = 15\text{m}^2$
 $\alpha = ?$

Lösungen

1. $r = 4\text{cm}$
 $\alpha = 60^\circ$
 $b = 4,19\text{cm}$
 $A = 8,38\text{cm}^2$

2. $A = 10\text{ m}^2$
 $r = 3\text{ m}$
 $b = 6,67\text{m}$
 $\alpha = 127,3^\circ$

3. $b = 3,84\text{cm}$
 $r = 5,5\text{cm}$
 $A = 10,56\text{cm}^2$
 $\alpha = 40^\circ$

4. $b = 7,50\text{m}$
 $r = 4\text{ m}$
 $A = 15\text{m}^2$
 $\alpha = 107,4^\circ$