2. Bez Kreisberechnungen Lösungen AB 2

1. $b = \frac{2r\pi \cdot \alpha}{360}$ $\alpha = \frac{A_S \cdot 360}{r^2\pi}$ $r = \frac{b \cdot 360}{2\pi \cdot \alpha}$

   $A_S = \frac{r^2\pi \cdot \alpha}{360}$ $\alpha = \frac{b \cdot 360}{2r\pi}$ $r = \sqrt{\frac{A_S \cdot 360}{\pi \cdot \alpha}}$

	a)	b)	c)	d)	e)	f)
r	2cm	4,8m	0,5m	8cm	**6,6cm**	**3,03m**
α	30°	**72°**	**103°**	**143°**	40°	50°
b	**1cm**	6m	0,9m	**20cm**	**4,6cm**	**2,64m**
A_{Sektor}	**1cm²**	**14,4m²**	**0,225m²**	80cm²	15cm²	4m²

2. $b = \frac{2r\pi \cdot \alpha}{360}$

α	**360°**	36°	3,6°	1°	10°	55°	**90°**	**120°**	123°	α°
b	$\mathbf{2r\pi}$	$\frac{\mathbf{r\pi}}{\mathbf{5}}$	$\frac{\mathbf{r\pi}}{\mathbf{50}}$	$\frac{\mathbf{r\pi}}{\mathbf{180}}$	$\frac{\mathbf{r\pi}}{\mathbf{18}}$	$\frac{\mathbf{11r\pi}}{\mathbf{36}}$	$\frac{2r\pi}{4}$	$\frac{2r\pi}{3}$	$\frac{\mathbf{123r\pi}}{\mathbf{180}}$	$\frac{\mathbf{2r\pi \cdot \alpha}}{\mathbf{360}}$

3. $b = \frac{2r\pi \cdot \alpha}{360}$ $A_S = \frac{r^2\pi \cdot \alpha}{360}$

   a) $b = \frac{2r\pi \cdot \alpha}{360} = \underline{\underline{3{,}4m}}$ $A_S = \frac{r^2\pi \cdot \alpha}{360} = \underline{\underline{8{,}5m^2}}$

   b) $b = \frac{2r\pi \cdot \alpha}{360} = \underline{\underline{9{,}8m}}$ $A_S = \frac{r^2\pi \cdot \alpha}{360} = \underline{\underline{24{,}5m^2}}$

   c) $b = \frac{2r\pi \cdot \alpha}{360} = \underline{\underline{20{,}1m}}$ $A_S = \frac{r^2\pi \cdot \alpha}{360} = \underline{\underline{50{,}3m^2}}$

   d) $b = \frac{2r\pi \cdot \alpha}{360} = \underline{\underline{15{,}4m}}$ $A_S = \frac{r^2\pi \cdot \alpha}{360} = \underline{\underline{38{,}5m^2}}$

4. Formeln siehe bei Nr.1

	a)	b)	c)	d)	e)	f)	g)
r	4m	**6,6cm**	**2,8m**	**187dm**	1cm	**1,2m**	**2,1cm**
d	**8m**	13,2cm	**5,5m**	**374dm**	**2cm**	**2,4m**	**4,1cm**
α	35°	82°	100°	23°	**86°**	244°	**55°**
u	**25,1m**	**41,5cm**	**17,4m**	**1174dm**	**6,3cm**	**7,5m**	13cm
b	**2,4m**	**9,4cm**	**4,8m**	75dm	1,5cm	**5,1m**	2cm
A_{Kreis}	**50,3m²**	**137cm²**	24m²	**1097m²**	**3,1cm²**	**4,4m²**	**13,4cm²**
A_{Sektor}	**4,9m²**	**31cm²**	**6,7m²**	**7006dm²**	**0,75cm²**	3m²	**2,1cm²**