

# Kreissektor

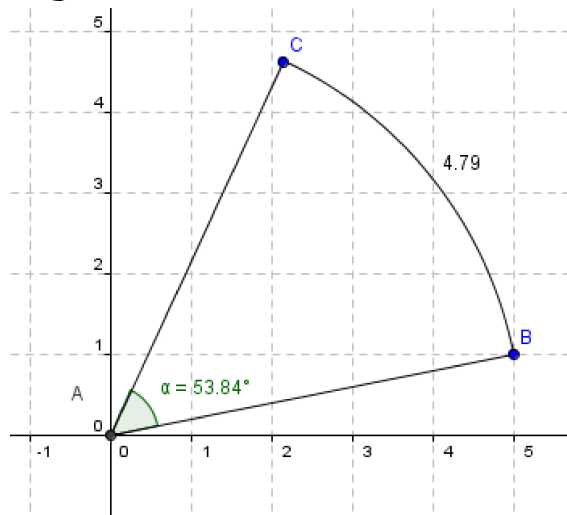
Dokumentnummer: DX1644  
 Fachgebiet: Geometrie des Kreises  
 Einsatz: 3HAK (zweites Lernjahr)



```
(%i1) kill(all);
(%o0) done
```

## 1 Berechnung des Radius

Figure 1:



```
(%i1) Formel:b=r*pi*%alpha/180;
```

```
(%o1) b = \frac{\pi \alpha r}{180}
```

```
(%i2) l:solve(Formel,r);
```

```
(%o2) [r = \frac{180 b}{\pi \alpha}]
```

```
(%i3) r:ev(r,l);
```

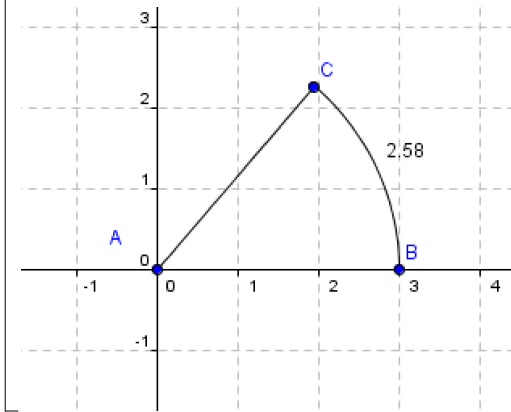
```
(%o3) \frac{180 b}{\pi \alpha}
```

```
(%i4) r:r,b=4.79,%alpha=53.84,numer$
r:floor(r*10+0.5)/10.0;
```

```
(%o5) 5.1
```

## 2 Berechnung des Winkels

Figure 2:



```
(%i6) kill(b,r);
```

```
(%o6) done
```

```
(%i7) l:solve(Formel,%alpha);
```

```
(%o7) [alpha = 180*b / pi*r]
```

```
(%i8) %alpha:ev(%alpha,l);
```

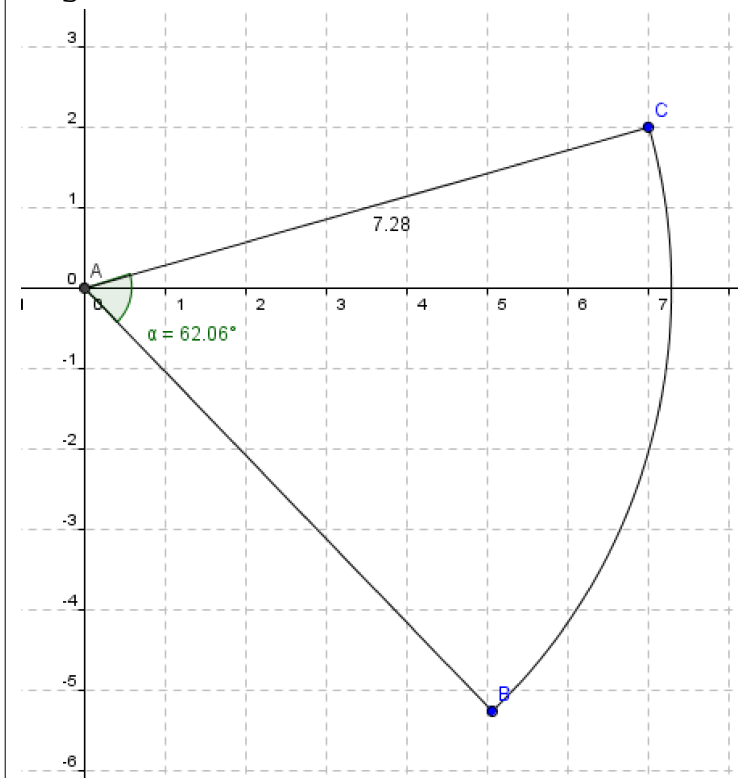
```
(%o8) 180*b / pi*r
```

```
(%i9) %alpha:%alpha,b=2.58,r=3,numer$  
%alpha:floor(%alpha*10+0.5)/10.0;
```

```
(%o10) 49.3
```

### 3 Berechnung des Bogens

Figure 3:



```
(%i11) kill(r,%alpha);
(%o11) done

(%i12) Formel;
(%o12)  $b = \frac{\pi \alpha r}{180}$ 

(%i13) b:ev(b,Formel);
(%o13)  $\frac{\pi \alpha r}{180}$ 

(%i14) b:b,r=7.28,%alpha=62.06,numer$
      b:floor(b*10+0.5)/10.0;
(%o15) 7.9
```