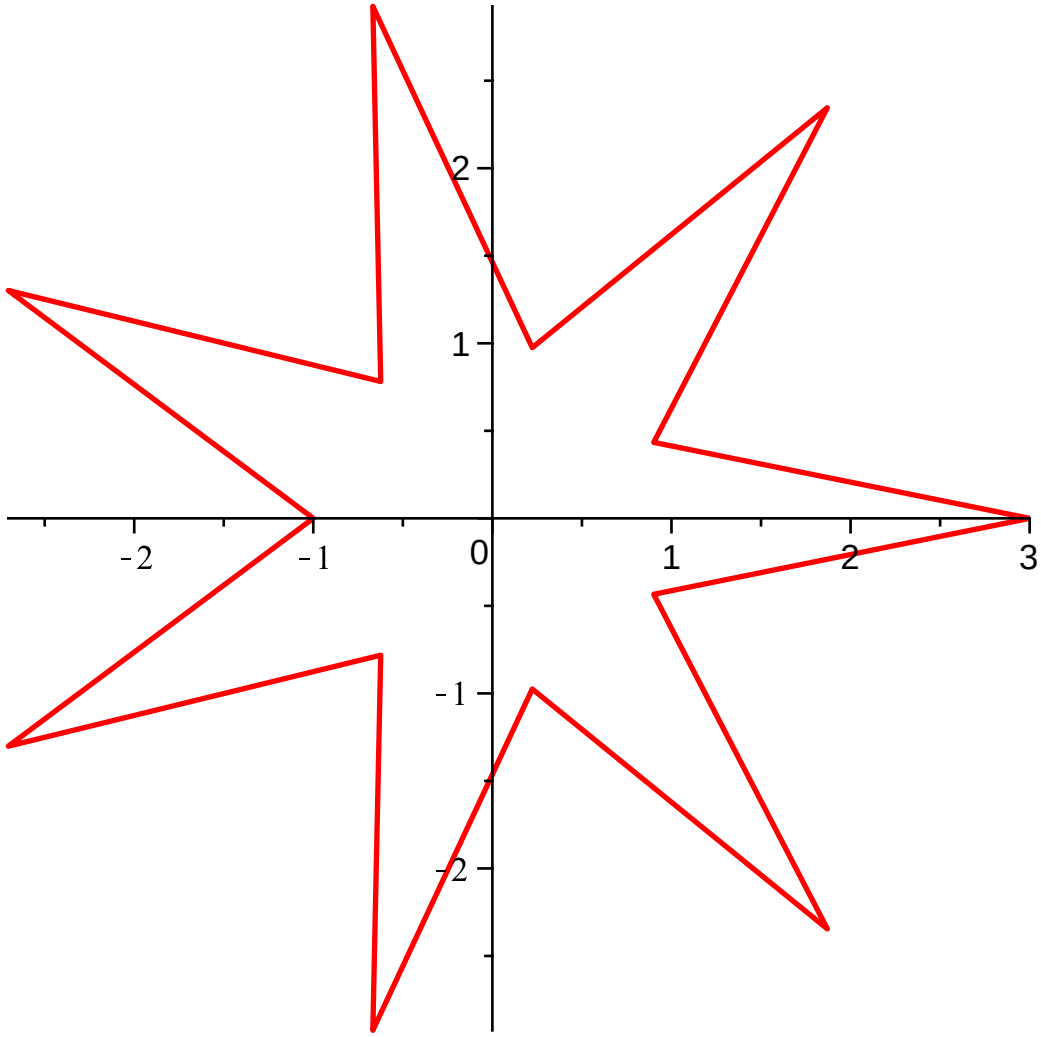
```
> n := 7;
```

$$n := 7 \tag{1}$$

```
> xy:=seq([(2+(-1)^k)*cos((2*Pi/(2*n))*k),(2+(-1)^k)*sin((2*Pi/
  (2*n))*k)],k=0..2*n);
```

$$xy := [3, 0], \left[\cos\left(\frac{1}{7}\pi\right), \sin\left(\frac{1}{7}\pi\right)\right], \left[3\cos\left(\frac{2}{7}\pi\right), 3\sin\left(\frac{2}{7}\pi\right)\right], \left[\cos\left(\frac{3}{7}\pi\right), \sin\left(\frac{3}{7}\pi\right)\right], \left[-3\cos\left(\frac{3}{7}\pi\right), 3\sin\left(\frac{3}{7}\pi\right)\right], \left[-\cos\left(\frac{2}{7}\pi\right), \sin\left(\frac{2}{7}\pi\right)\right], \left[-3\cos\left(\frac{1}{7}\pi\right), 3\sin\left(\frac{1}{7}\pi\right)\right], [-1, 0], \left[-3\cos\left(\frac{1}{7}\pi\right), -3\sin\left(\frac{1}{7}\pi\right)\right], \left[-\cos\left(\frac{2}{7}\pi\right), -\sin\left(\frac{2}{7}\pi\right)\right], \left[-3\cos\left(\frac{3}{7}\pi\right), -3\sin\left(\frac{3}{7}\pi\right)\right], \left[\cos\left(\frac{3}{7}\pi\right), -\sin\left(\frac{3}{7}\pi\right)\right], \left[3\cos\left(\frac{2}{7}\pi\right), -3\sin\left(\frac{2}{7}\pi\right)\right], \left[\cos\left(\frac{1}{7}\pi\right), -\sin\left(\frac{1}{7}\pi\right)\right], [3, 0] \tag{2}$$

```
> plot([xy],color=red,thickness=2);
```



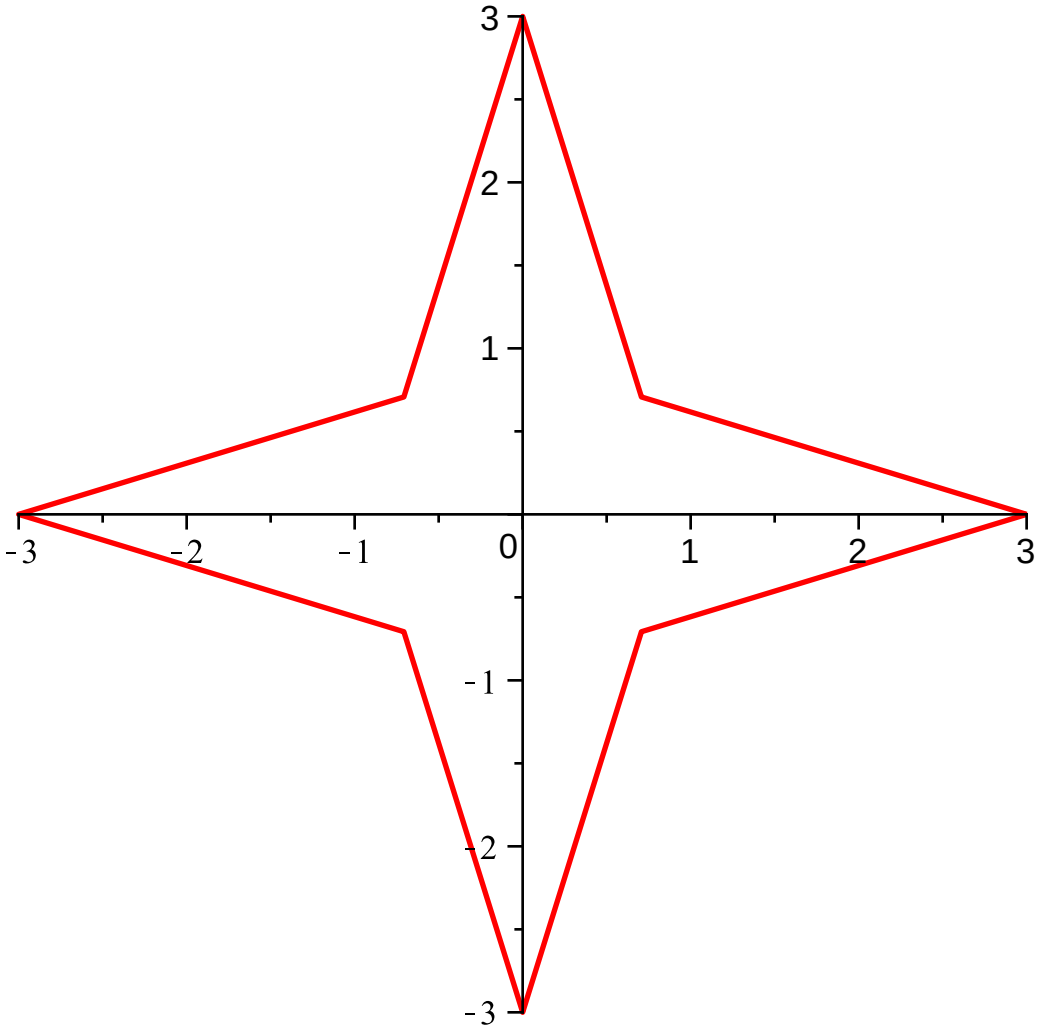

```
> n := 4;
```

$$n := 4 \tag{3}$$

```
> xy:=seq([(2+(-1)^k)*cos((2*Pi/(2*n))*k),(2+(-1)^k)*sin((2*Pi/
  (2*n))*k)],k=0..2*n);
```

$$xy := [3, 0], \left[\frac{1}{2}\sqrt{2}, \frac{1}{2}\sqrt{2}\right], [0, 3], \left[-\frac{1}{2}\sqrt{2}, \frac{1}{2}\sqrt{2}\right], [-3, 0], \left[-\frac{1}{2}\sqrt{2}, -\frac{1}{2}\sqrt{2}\right], [0, -3], \left[\frac{1}{2}\sqrt{2}, -\frac{1}{2}\sqrt{2}\right], [3, 0] \quad (4)$$

```
> plot([xy],color=red,thickness=2);
```




```
> n := 7;
```

$$n := 7 \quad (5)$$

```
> # Loesungen mit for Schleifen sind auch okay.
> xy := [seq(k,k=0..2*n)];
```

$$xy := [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14] \quad (6)$$

```
> for k from 0 to n-1 do
     xy[2*k+1]:=  [3*cos((2*Pi/n)*k),     3*sin((2*Pi/n)*k)]:
     xy[2*k+2]:=  [cos((2*Pi/n)*(k+1/2)), sin((2*Pi/n)*(k+1/2))]:
  od:
> xy;
```

(7)

$$\left[[3,0],\left[\cos\left(\frac{1}{7}\pi\right),\sin\left(\frac{1}{7}\pi\right)\right],\left[3\cos\left(\frac{2}{7}\pi\right),3\sin\left(\frac{2}{7}\pi\right)\right],\left[\cos\left(\frac{3}{7}\pi\right),\sin\left(\frac{3}{7}\pi\right)\right],\left[-3\cos\left(\frac{3}{7}\pi\right),3\sin\left(\frac{3}{7}\pi\right)\right],\left[-\cos\left(\frac{2}{7}\pi\right),\sin\left(\frac{2}{7}\pi\right)\right],\left[-3\cos\left(\frac{1}{7}\pi\right),3\sin\left(\frac{1}{7}\pi\right)\right],[-1,0],\left[-3\cos\left(\frac{1}{7}\pi\right),-3\sin\left(\frac{1}{7}\pi\right)\right],\left[-\cos\left(\frac{2}{7}\pi\right),-\sin\left(\frac{2}{7}\pi\right)\right],\left[-3\cos\left(\frac{3}{7}\pi\right),-3\sin\left(\frac{3}{7}\pi\right)\right],\left[\cos\left(\frac{3}{7}\pi\right),-\sin\left(\frac{3}{7}\pi\right)\right],\left[3\cos\left(\frac{2}{7}\pi\right),-3\sin\left(\frac{2}{7}\pi\right)\right],\left[\cos\left(\frac{1}{7}\pi\right),-\sin\left(\frac{1}{7}\pi\right)\right],14\right] \quad (7)$$

```
> xy[2*n+1]:=xy[1];
```

$$xy_{15} := [3,0] \quad (8)$$

```
> plot(xy,color=red,thickness=2);
```