

Exercices d'applications des mathématiques - Corrigé de la série n° 3

Cours 3AMOS01

1. Courbes.

Il suffit de poser

```
2 x=cos(3*t);
3 y=sin(3*t);
4 z=t/(2*pi);
```

2. Courbes.

Il suffit de poser

```
1 t=0:0.01:1;
2 x=t;
3 y=t.^2;
4 z=t.*sin(50*t);
```

3. Courbes.

Il suffit de poser

```
1 t=0:2*pi/1000:2*pi;
2 z=-1+t/pi;
3 x=(1+abs(z)).*cos(20*t);
4 y=(1+abs(z)).*sin(20*t);
```

4. Courbes.

Il suffit de poser

```
1 t=0:2*pi/1000:2*pi;
2 z=-1+t/pi;
3 x=(1-z.^2).*cos(20*t);
4 y=(1-z.^2).*sin(20*t);
```

5. Courbes.

Il suffit de poser

```
1 t=0:2*pi/10000:2*pi;
2 z=-1+t/pi;
3 x=(1-z.^2).*cos(5*t);
4 y=(1-z.^2).*sin(5*t);
```

6. Courbes.

Il suffit de poser

```
1 t=0:2*pi/10000:2*pi;
2 z=-1+t/pi;
3 x=(1-z.^2).*(1+0.1*sin(200*t)).*cos(5*t);
4 y=(1-z.^2).*(1+0.1*sin(200*t)).*sin(5*t);
```

7. Courbes.

Il suffit de poser

```
1 t=0:2*pi/10000:2*pi;  
2 z=-1+t/pi;  
3 x=(1-z.^2).*(1+0.1.*z.*sin(200*t)).*cos(5*t);  
4 y=(1-z.^2).*(1+0.1.*z.*sin(200*t)).*sin(5*t);
```