

Exercice 1:

Serie 2:

$$y = x^3 - x^2 + 1$$

$$y = @(x) x^3 - x^2 + 1;$$

1° $y(3)$

2° $y = @(x) x^3 - x^2 + 1;$

$$x = [1 \ 2 \ 3 \ 4];$$

$$y(x)$$

3° fonction $y = f(x)$

| $y = x^3 - x^2 + 1;$
end

$f(3)$ ou $x=3;$ et $f(x)$

4° $x = \text{linspace}(-10, 10, 100)$

5° $\text{plot}(x, f(x))$

6° $\text{fplot}(@(x)f(x), [-10 \ 10])$

Exercice 2:

1° $S_n = @(n) n * \sin(1/n);$

2° $S_n(100) = 1$

3° $n = [1 : 20]$

$$\text{plot}(n, S(n))$$

et: $\text{fplot}(@(n)S(n), [1 \ 20 \ 0,995 \ 1,001])$

$x_{\min}$ $x_{\max}$ $y_{\min}$ $y_{\max}$

Exercise 3 :

$$x = [-\pi : \pi];$$

$$y = [-\pi : \pi];$$

$$m = @(x,y) (1/3) * \sqrt{x.^2 + y.^2};$$

$$t = [0 : \pi];$$

$$[X, Y] = \text{meshgrid}(-\pi : .3 : \pi);$$

$$Z = m(X, Y)$$

$$\text{mesh}(X, Y, Z)$$

hold on

$$t = [-\pi : 0.01 : \pi]$$

$$[x, y, z] = \text{spiral}(t);$$

$$\text{plot3}(x, y, z)$$

grid on

$$\text{axis}([-4, 4, -4, 4, 0, 1.5])$$

Exercise 4 :

1. function $[s] = \text{lance}(n)$

num = zeros(1, n);

for i = 1 : n

num(i) = floor(1 + 6 * rand);

end

s = sum(num);

end

$$x = \text{floor}(a + (b+1-a) * \text{rand})$$

2. function [s] = lance 2(n)

num = rand(1,n)

num = floor(1 + 6 * num);

s = sum(num);

end

3. function [s] = sommet 1(n)

x = floor(1 + 6 * rand(1,n))

disp(x);

s = sum(x);

end

4. function [sg] = somme 2(n,m)

for i = 1 : m

s = lance(n);

sg(i) = s;

end

end

Dans le terminal:

hist(somme 2(2, 1000), 1000)

Exercice 5:

1. function [s] = tirage()

s = floor(1 + 4 * rand)

if s == 1

disp('tirage: rouge')

elseif s == 2

disp('tirage: blanche')

elseif s == 3

disp('tirage: jaune')

elseif s == 4

disp('tirage: verte')

endend

2. function [s]=tirage2()

```

s=floor(1+4*rand);
if s==1
    disp('votre score est 10')
elseif s==2
    disp('votre score est 5')
elseif s==3
    disp('votre score est 0')
elseif s==4
    disp('votre score est -5')
end
end

```

3. function [r]=tirage3(n)

```

for i=1:n
    s=floor(1+4*rand);
    if s==1
        x=10;
    elseif s==2
        x=5;
    elseif s==3
        x=0;
    elseif s==4
        x=-5;
    end
    r(i)=x
end
end

```

4. function [som]=tirage4(n)

```

s=floor(1+4*rand);
som=0;
for i=1:n
    if s==1    x=10;
    elseif s==2    x=5;
    elseif s==3    x=0;
    elseif s==4    x=-5;
    end
    som=som+x;
end
end

```