1.

$\int_0^x \frac{1}{75}x\,dx$ Ir

Gráfica » Ejemplos »

Solución

Mostrar pasos

$\int_0^x \frac{1}{75}xdx = \frac{x^2}{150}$

$\int_0^{10} \frac{1}{75}x\,dx + \int_{10}^x \frac{2}{5} - \frac{2}{75}xdx$ Ir

Ejemplos »

Solución

Mostrar pasos

$\int_0^{10} \frac{1}{75}xdx + \int_{10}^x \frac{2}{5} - \frac{2}{75}xdx = -\frac{x^2}{75} + \frac{2x}{5} - 2$

2.

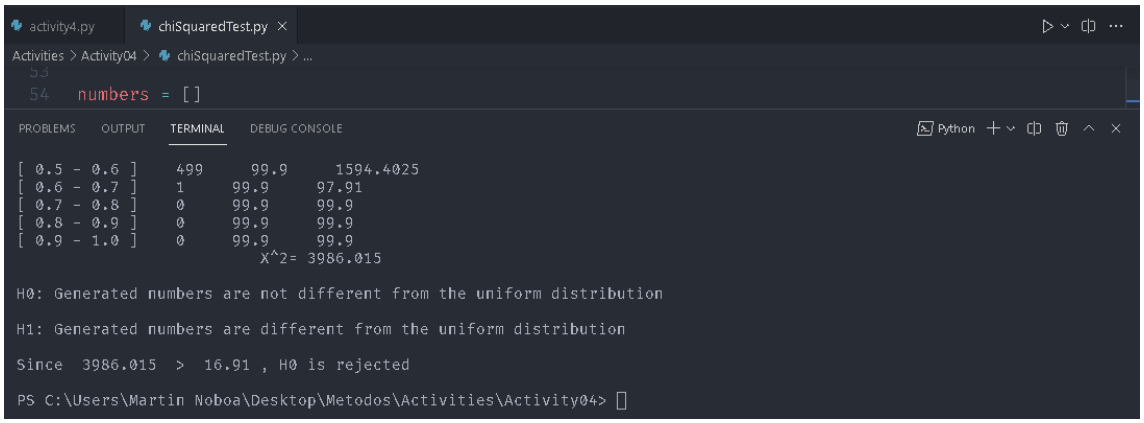

$\frac{d}{dx}\left(2x^2\right)$
Ir
Gráfica »
Ejemplos »
Solución
Mostrar pasos
$\frac{d}{dx}\left(2x^2\right)=4x$

3.

```python
def linearCongruentialMethod(Xo, m, a, c,noOfRandomNums):
    r=[0] * (noOfRandomNums)
    for i in range( noOfRandomNums):
        xNext=((Xo*a)+c)%m
        r[i] = xNext/m
        Xo=xNext
    return r


Xo = 4
m = 120
a = 20
c = 1
noOfRandomNums = 1000
randomNums = [0] * (noOfRandomNums)

r=linearCongruentialMethod(Xo, m, a, c,noOfRandomNums)
print(r)
```



4.

$$\int_{-1}^{0}\left(\frac{3}{4}\sqrt{x+1}\right)dx+\int_{0}^{x}1-x\,dx=0.75$$

Ir

Ejemplos »

Solución

Mostrar pasos

$$\int_{-1}^{0}\left(\frac{3}{4}\sqrt{x+1}\right)dx+\int_{0}^{x}1-xdx=0.75\quad:\quad x=\frac{2-\sqrt{2}}{2},x=\frac{2+\sqrt{2}}{2}$$

$$\frac{2-\sqrt{2}}{2}$$

Ir

Ejemplos »

Solución

Mostrar pasos

$$\frac{2-\sqrt{2}}{2}=0.29289\ldots$$

$$\frac{2+\sqrt{2}}{2}$$

Ir

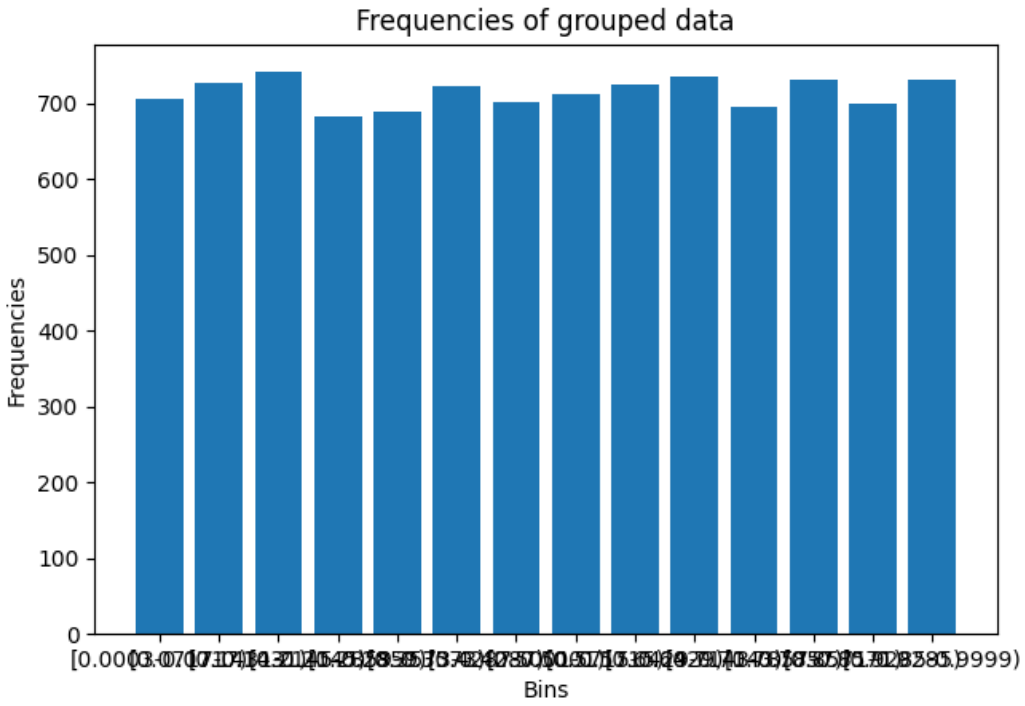
Ejemplos »

Solución

Mostrar pasos

$$\frac{2+\sqrt{2}}{2}=1.70710\ldots$$

5.


Frequencies of grouped data
Frequencies
0
100
200
300
400
500
600
700
Bins

6.

```
PS C:\Users\Martin Noboa\Desktop\Metodos\Activities\Activity03> & "C:/Users/Martin Noboa/AppData/Local/Programs/Python/Python39/python.exe" "c:/Users/Martin Noboa/Desktop/Metodos/Activities/Activity04/chiSquaredTest.py"
[ 0.0 - 0.1 ]    1000     100.0     8100.0
[ 0.1 - 0.2 ]    0     100.0     100.0
[ 0.2 - 0.3 ]    0     100.0     100.0
[ 0.3 - 0.4 ]    0     100.0     100.0
[ 0.4 - 0.5 ]    0     100.0     100.0
[ 0.5 - 0.6 ]    0     100.0     100.0
[ 0.6 - 0.7 ]    0     100.0     100.0
[ 0.7 - 0.8 ]    0     100.0     100.0
[ 0.8 - 0.9 ]    0     100.0     100.0
[ 0.9 - 1.0 ]    0     100.0     100.0
                        X^2= 9000.0

H0: Generated numbers are not different from the uniform distribution

H1: Generated numbers are different from the uniform distribution

Since  9000.0  >  16.91 , H0 is rejected

PS C:\Users\Martin Noboa\Desktop\Metodos\Activities\Activity03>
```

7.

```
(+): 4961    (-): 5038    total: 9999
Positive runs:  3359
Negative runs:  3359
Lambda:  6665.6667
Sigma:  42.1578
Z-Score:  1.2414

H0: Appereance of the numbers is random

H1: Appereance of the numbers is not random

Since  1.2414  <  1.96 , H0 is not rejected
```

```
(+): 4973    (-): 5026    total: 9999
Positive runs:  3348
Negative runs:  3348
Lambda:  6665.6667
Sigma:  42.1578
Z-Score:  0.7195

H0: Appereance of the numbers is random

H1: Appereance of the numbers is not random

Since  0.7195  <  1.96 , H0 is not rejected
```

```
(+): 5025    (-): 4974    total: 9999
Positive runs:  3368
Negative runs:  3369
Lambda:  6665.6667
Sigma:  42.1578
Z-Score:  1.6921

H0: Appereance of the numbers is random

H1: Appereance of the numbers is not random

Since  1.6921  <  1.96 , H0 is not rejected
```