# polar-non-return-to-zero

March 29, 2024

[1]:
```
import numpy as np
import matplotlib.pyplot as plt
```

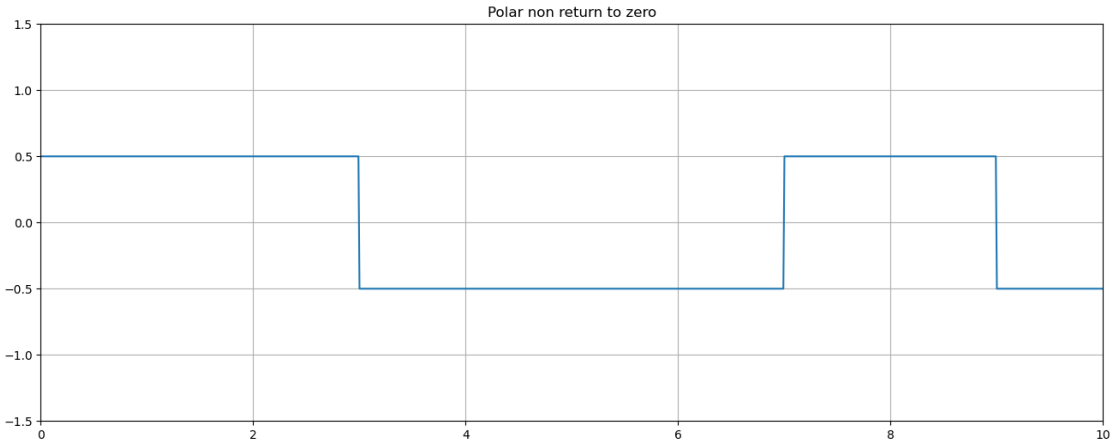
[3]:
```
N = 10
n = np.random.randint(0, 2, N)
n
```

[3]:
```
array([1, 1, 1, 0, 0, 0, 0, 1, 1, 0])
```

[9]:
```
t = np.arange(0, N, 0.01)
nn = [0.5 if bit==1 else -0.5 for bit in n]
nn = np.repeat(nn, int(len(t))/ N)
```

[10]:
```
plt.figure(figsize=(16, 6))
plt.plot(t, nn)
plt.grid(True)
plt.axis([0, N, -1.5, 1.5])
plt.title("Polar non return to zero")
```

[10]:
```
Text(0.5, 1.0, 'Polar non return to zero')
```




[11]:
```
n
```

[11]:
```
array([1, 1, 1, 0, 0, 0, 0, 1, 1, 0])
```

[ ]: