Distribución exponencial

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El tiempo que pasa para que pase algo

En Python

```
from scipy.stats import expon
import numpy as np
import matplotlib.pyplot as plt

fig, ax = plt.subplots(1,1)

lam = 3
rv = expon(scale = 1/lam)

mean, var, skew, kurt = rv.stats(moments = 'mvsk')
print("Media %f"%mean)
```

```
## Media 0.333333
```

```
print("Varianza %f"%var)
```

```
## Varianza 0.111111
```

```
print("Sesgo %f"%skew)
```

```
## Sesgo 2.000000
```

```
print("Curtosis %f"%kurt)
```

```
## Curtosis 6.000000
```

```
x = np.linspace(0, 3, 1000)
ax.plot(x, rv.pdf(x), 'r-', lw = 5, alpha = 0.6, label = "Exp(10)")

r = rv.rvs(size = 100000)
ax.hist(r, density = True, histtype = 'stepfilled', alpha = 0.2)
```

```
## (array([1.76616092e+00, 5.35696995e-01, 1.65007463e-01, 4.89465471e-02,
##         1.53259277e-02, 4.18671865e-03, 1.44632099e-03, 5.07481049e-04,
##         7.61221573e-05, 5.07481049e-05]), array([1.52114347e-06, 3.94104908e-01, 7.88208295e-01, 1.18
##         1.57641507e+00, 1.97051846e+00, 2.36462184e+00, 2.75872523e+00,
##         3.15282862e+00, 3.54693200e+00, 3.94103539e+00]), <a list of 1 Patch objects>)
```

```
ax.legend(loc = "best", frameon= False)
plt.show()
```