

# Mathematische Statistik

# Binomialverteilung

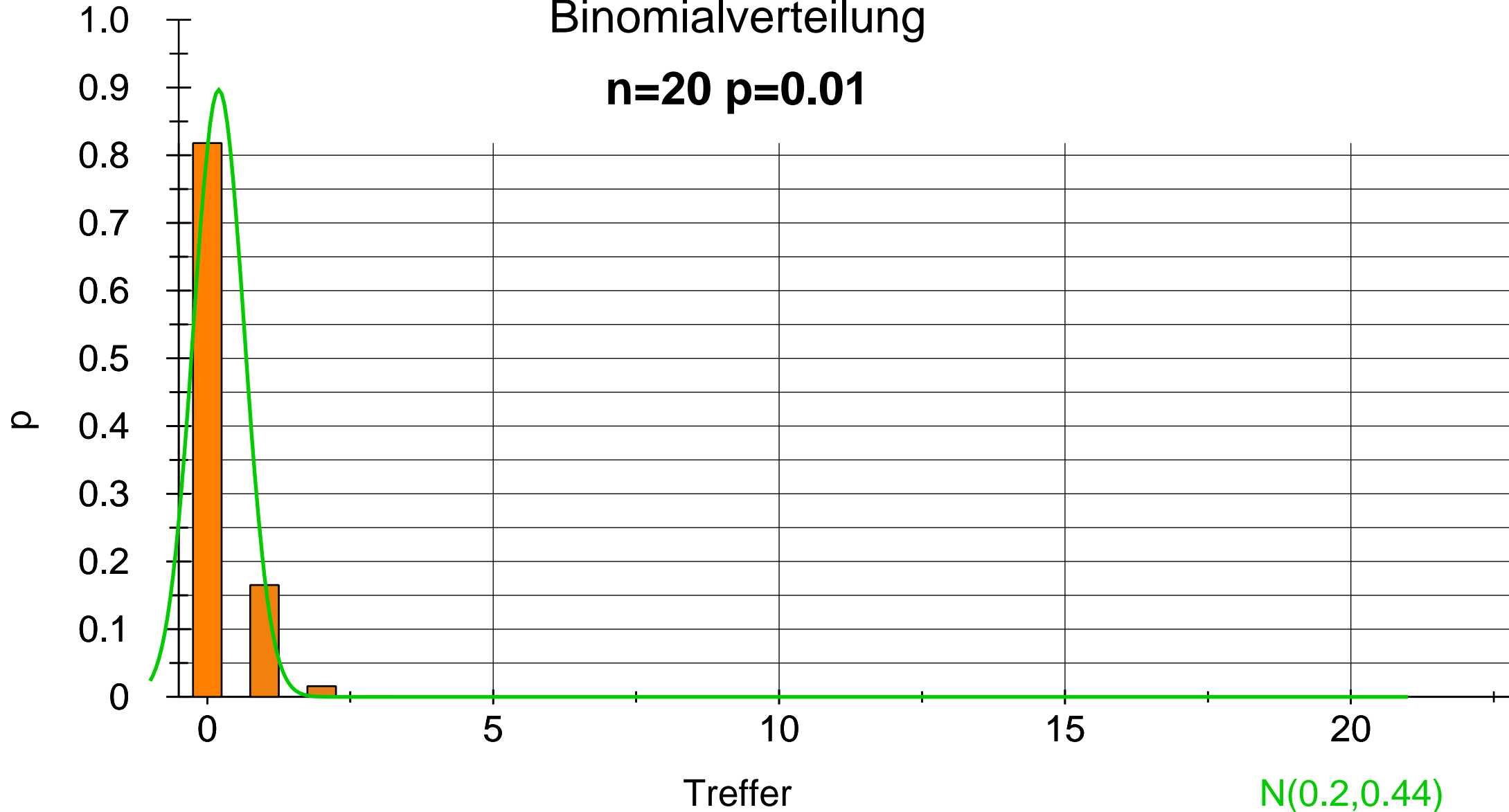
*G. Wegener*

Hannover, im Oktober 2017,  
alle Rechte vorbehalten.

# Mathematische Statistik

## Binomialverteilung

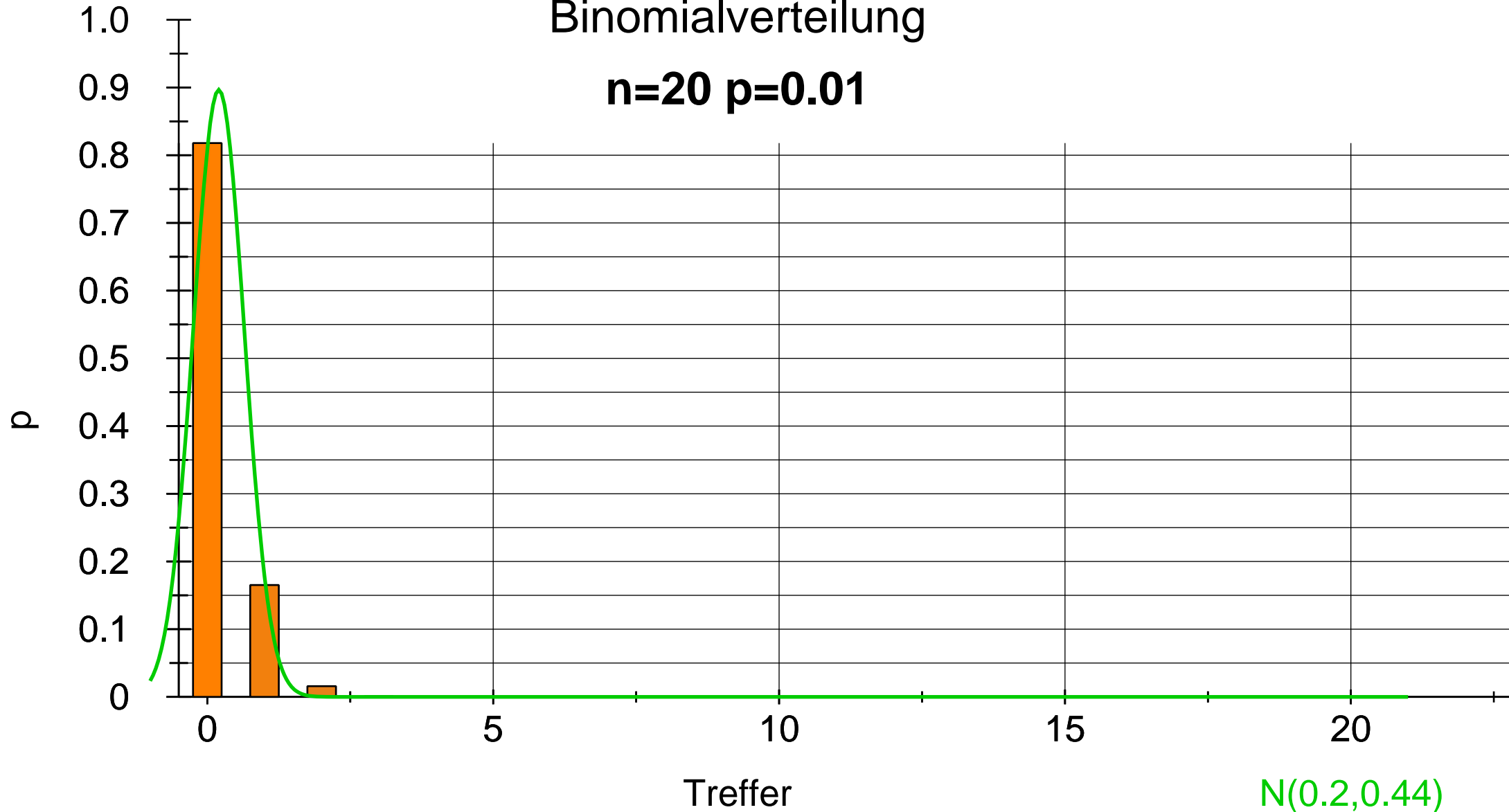
**$n=20$   $p=0.01$**



# Mathematische Statistik

## Binomialverteilung

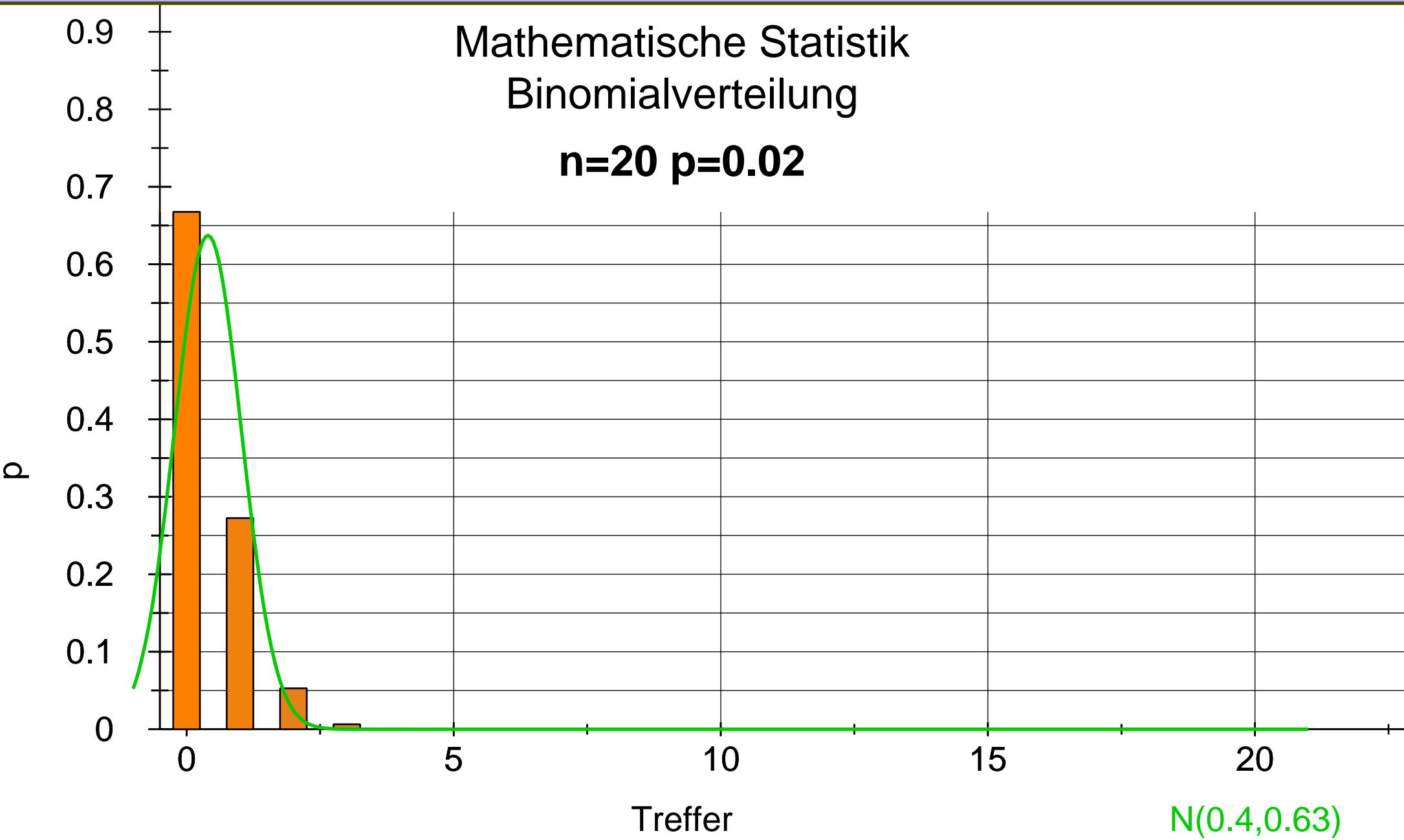
**$n=20$   $p=0.01$**



# Mathematische Statistik

## Binomialverteilung

**n=20 p=0.02**

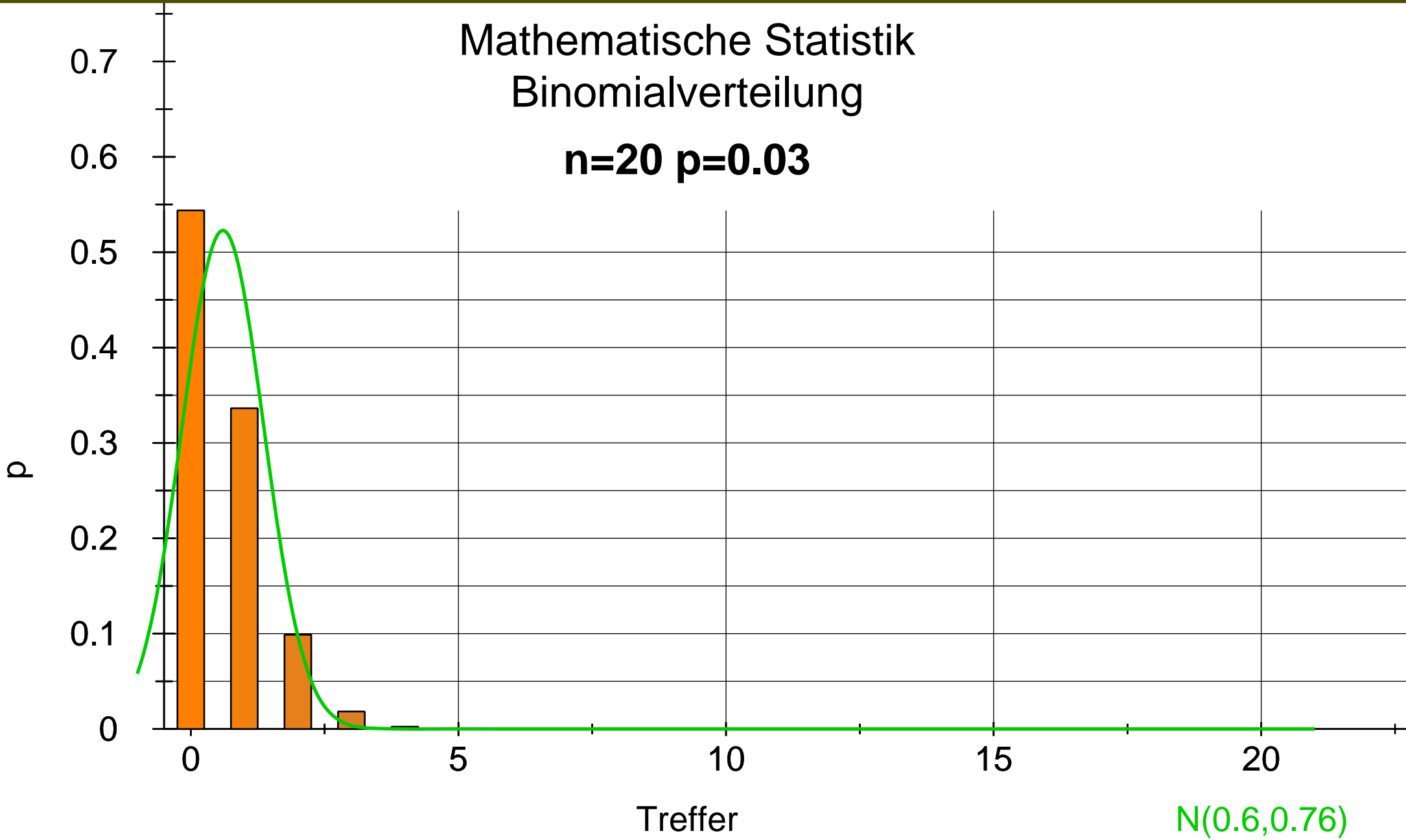


$N(0.4, 0.63)$

# Mathematische Statistik

## Binomialverteilung

**n=20 p=0.03**

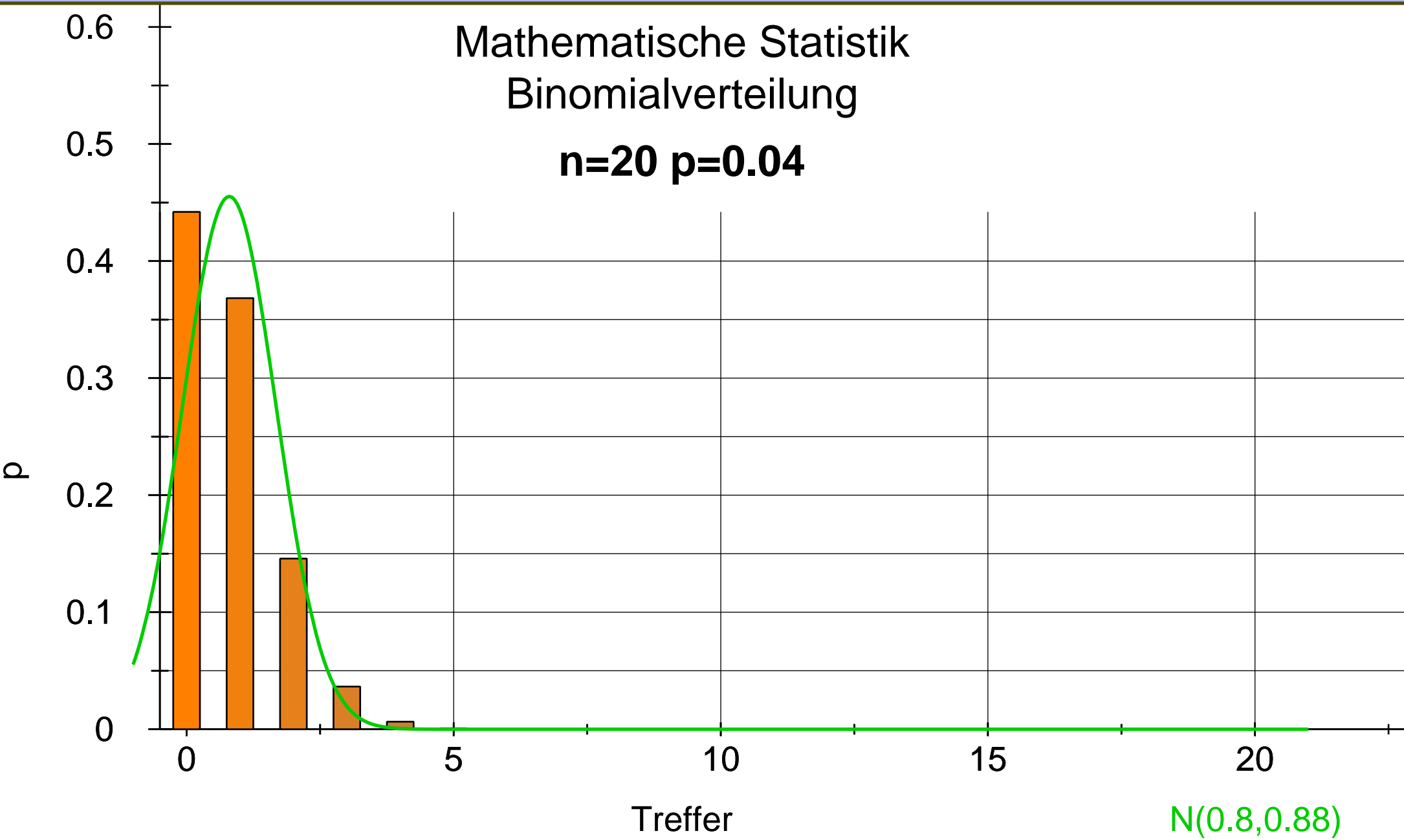


$N(0.6, 0.76)$

# Mathematische Statistik

## Binomialverteilung

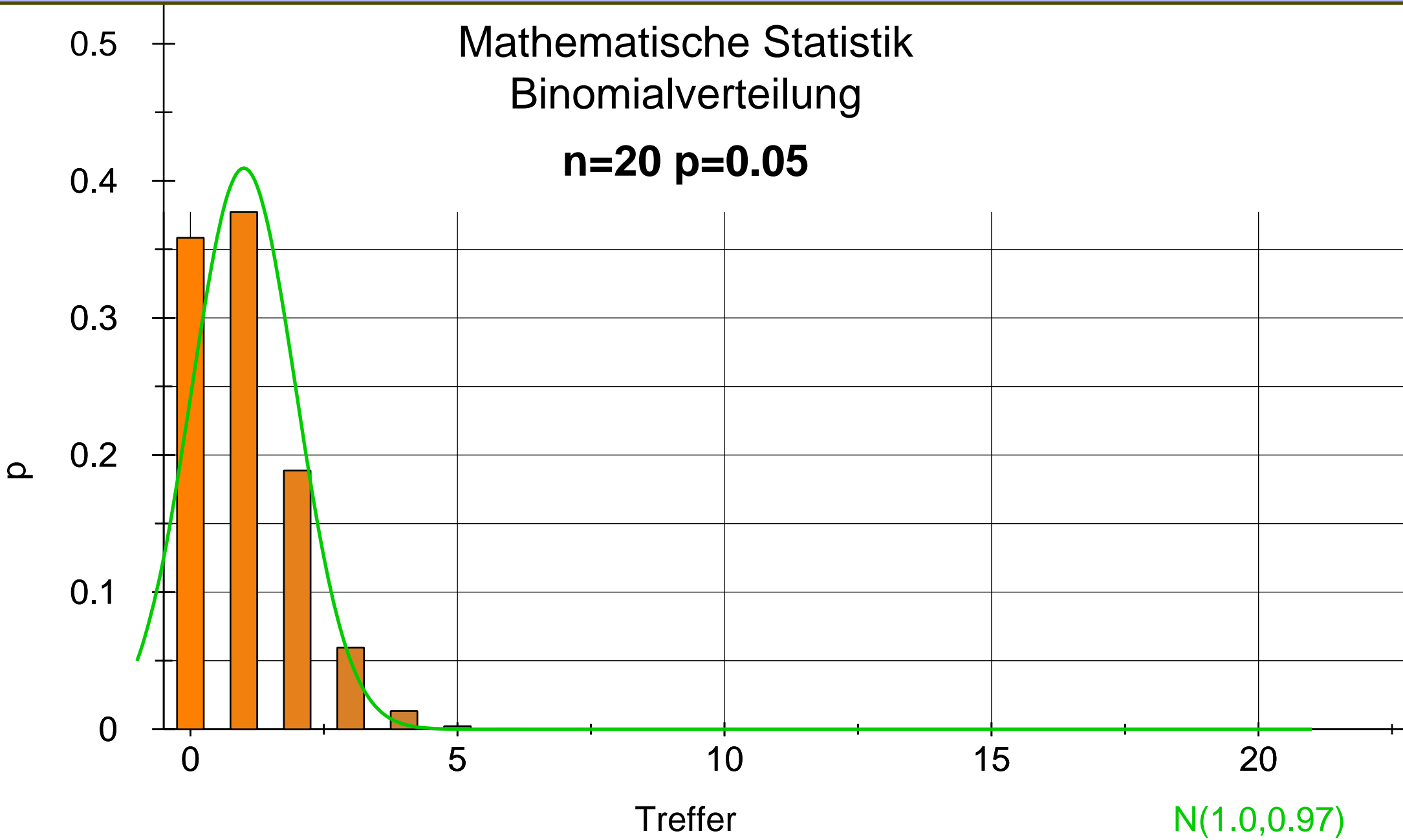
**n=20 p=0.04**



$N(0.8, 0.88)$

# Mathematische Statistik Binomialverteilung

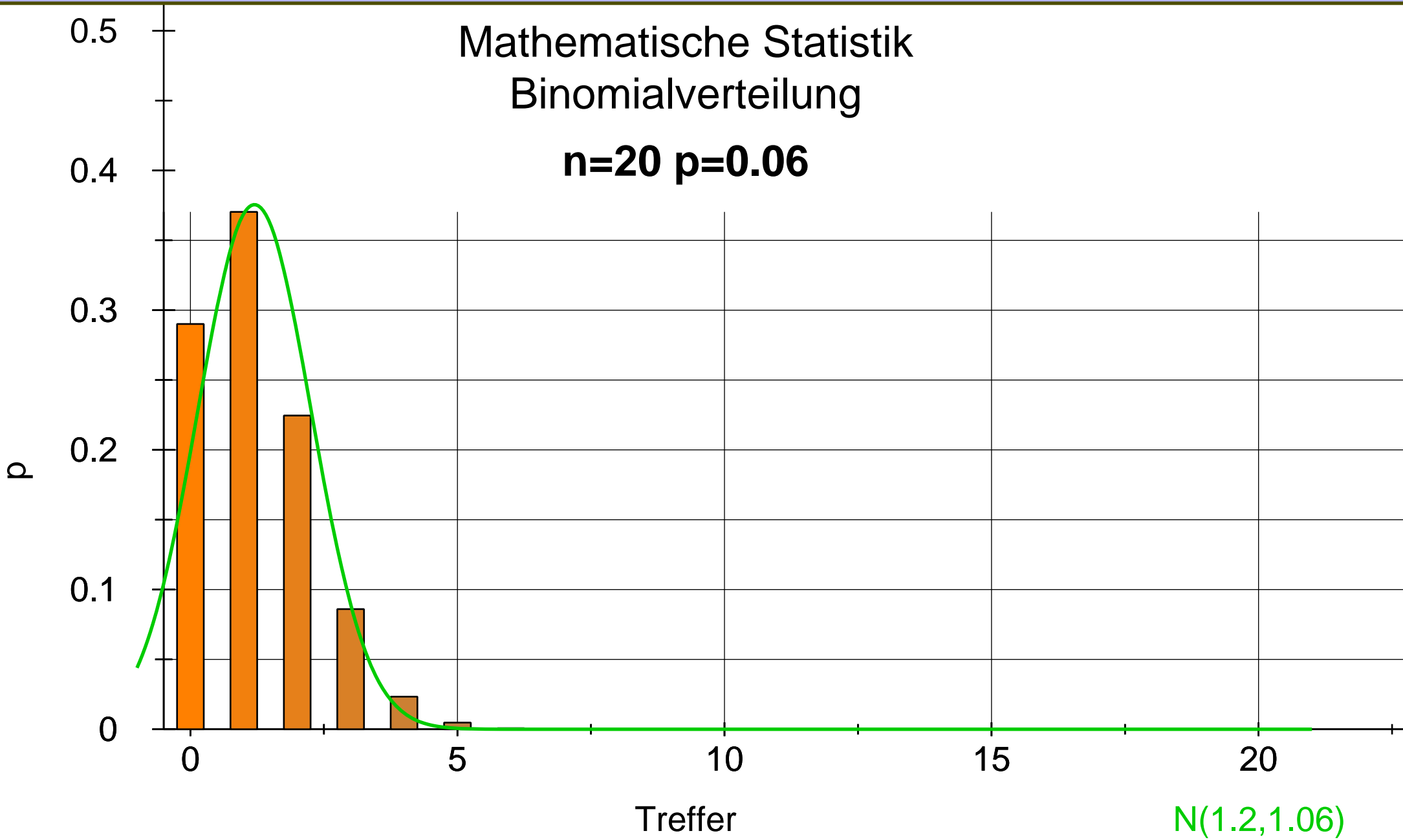
**n=20 p=0.05**



# Mathematische Statistik

## Binomialverteilung

**n=20 p=0.06**



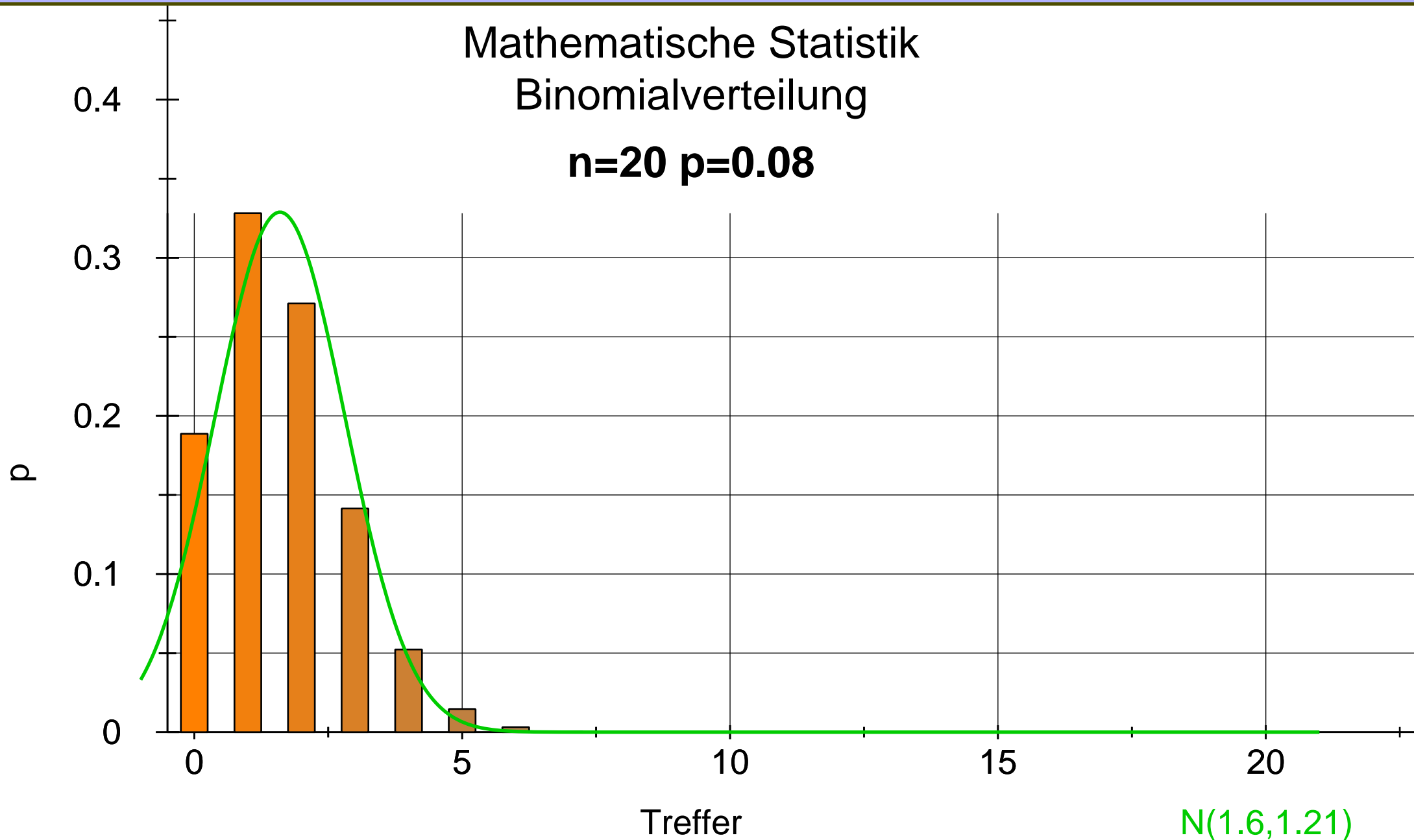
$N(1.2, 1.06)$



# Mathematische Statistik

## Binomialverteilung

**n=20 p=0.08**

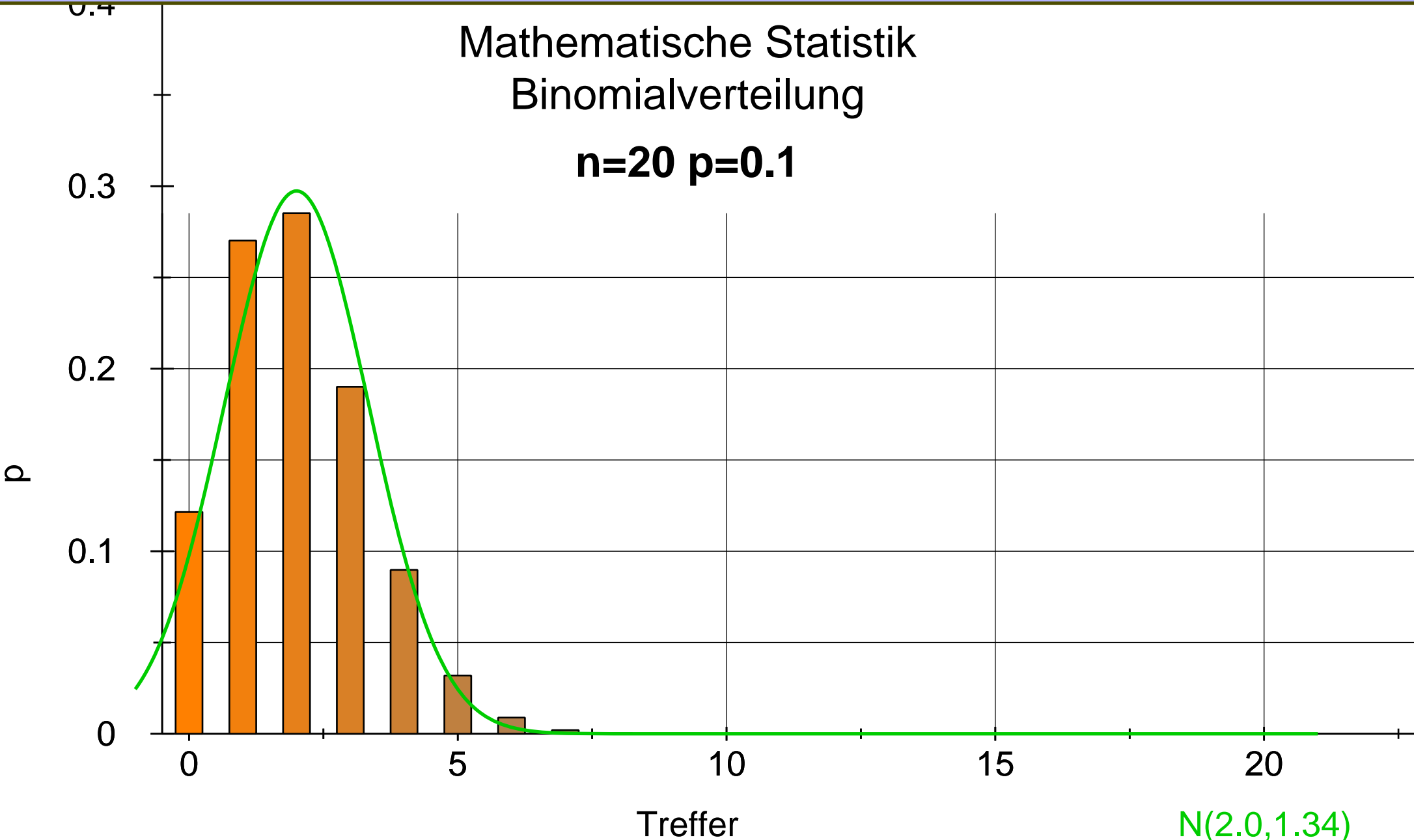


$N(1.6, 1.21)$

# Mathematische Statistik

## Binomialverteilung

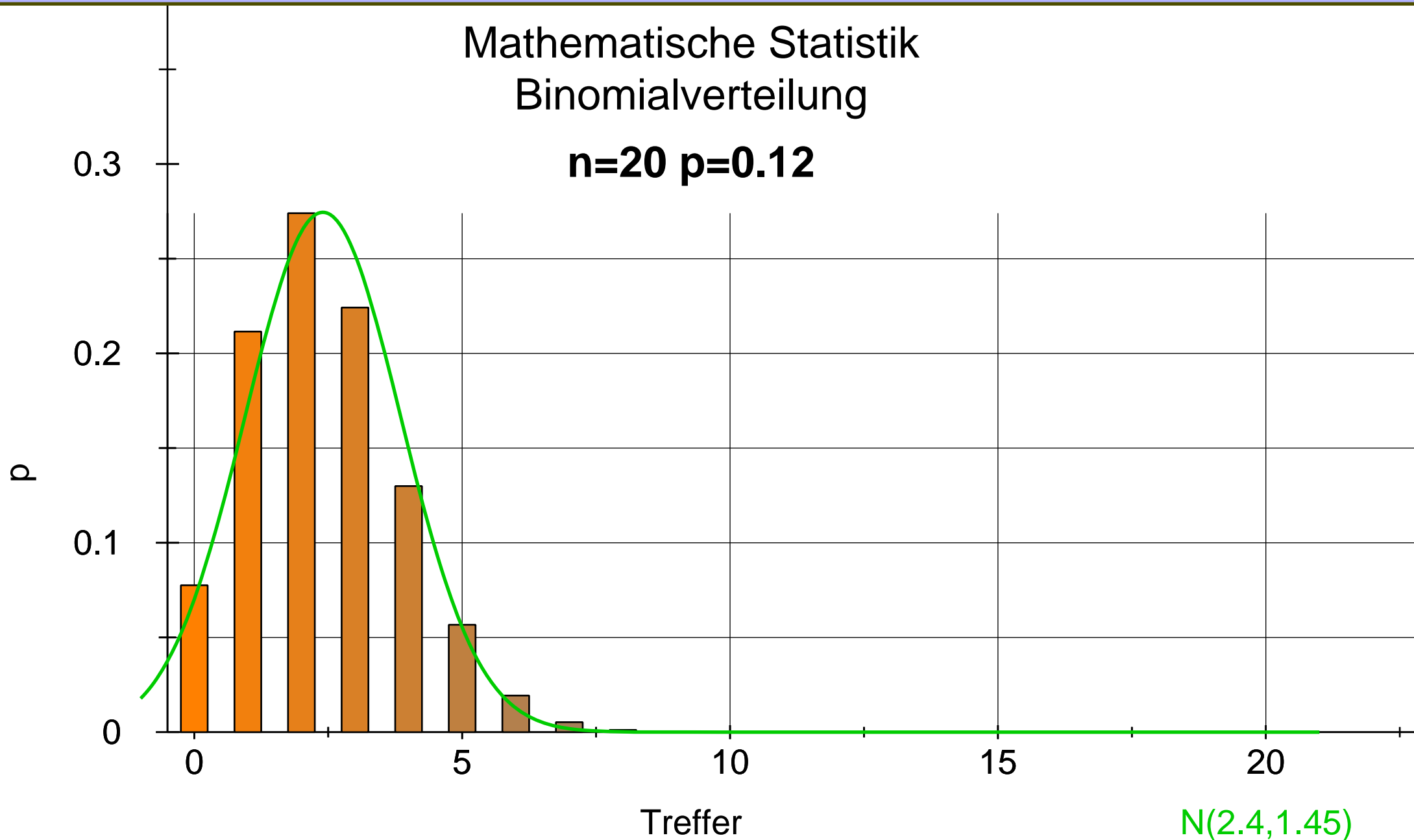
**n=20 p=0.1**



# Mathematische Statistik

## Binomialverteilung

**$n=20$   $p=0.12$**

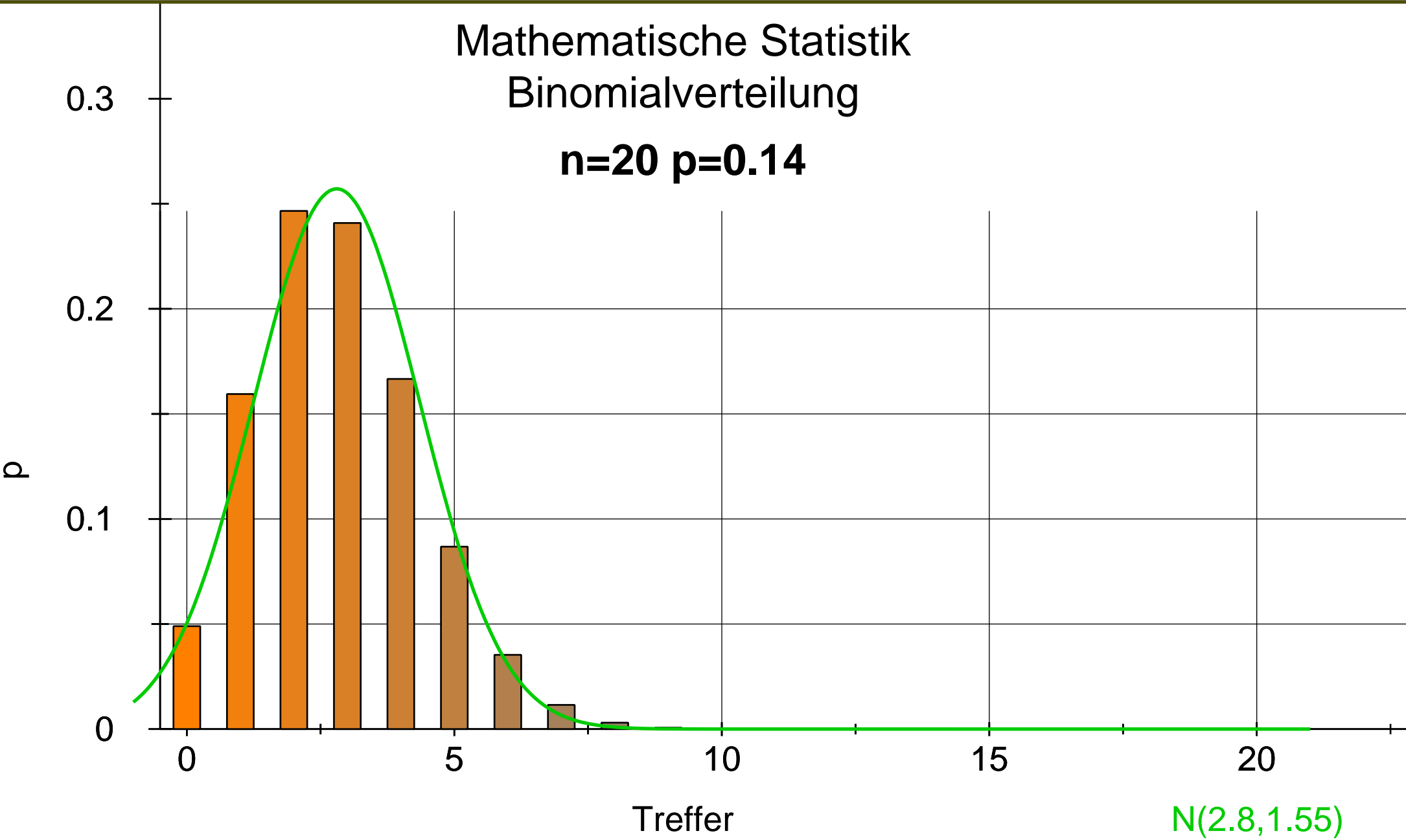


$N(2.4, 1.45)$

# Mathematische Statistik

## Binomialverteilung

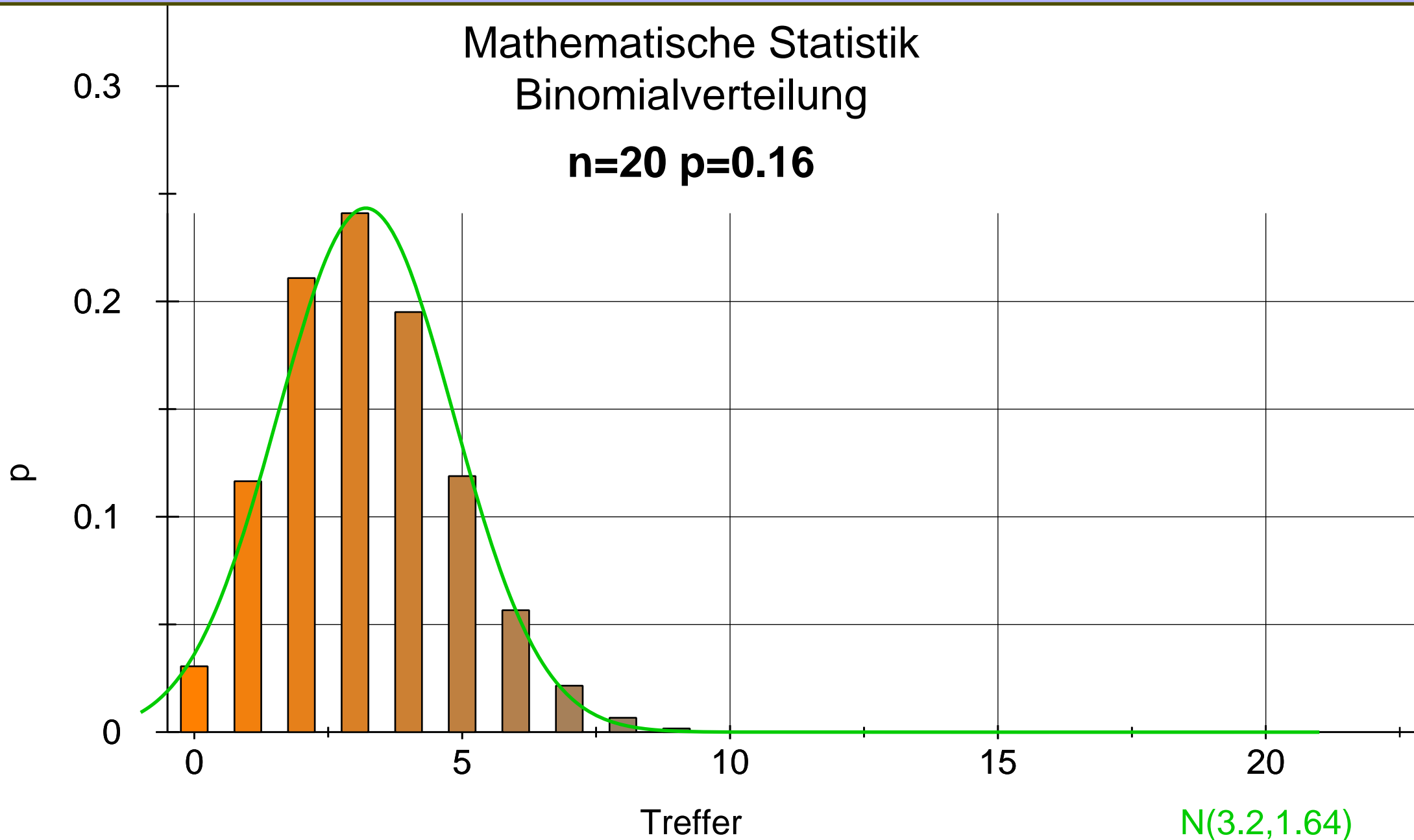
**n=20 p=0.14**



$N(2.8, 1.55)$

# Mathematische Statistik Binomialverteilung

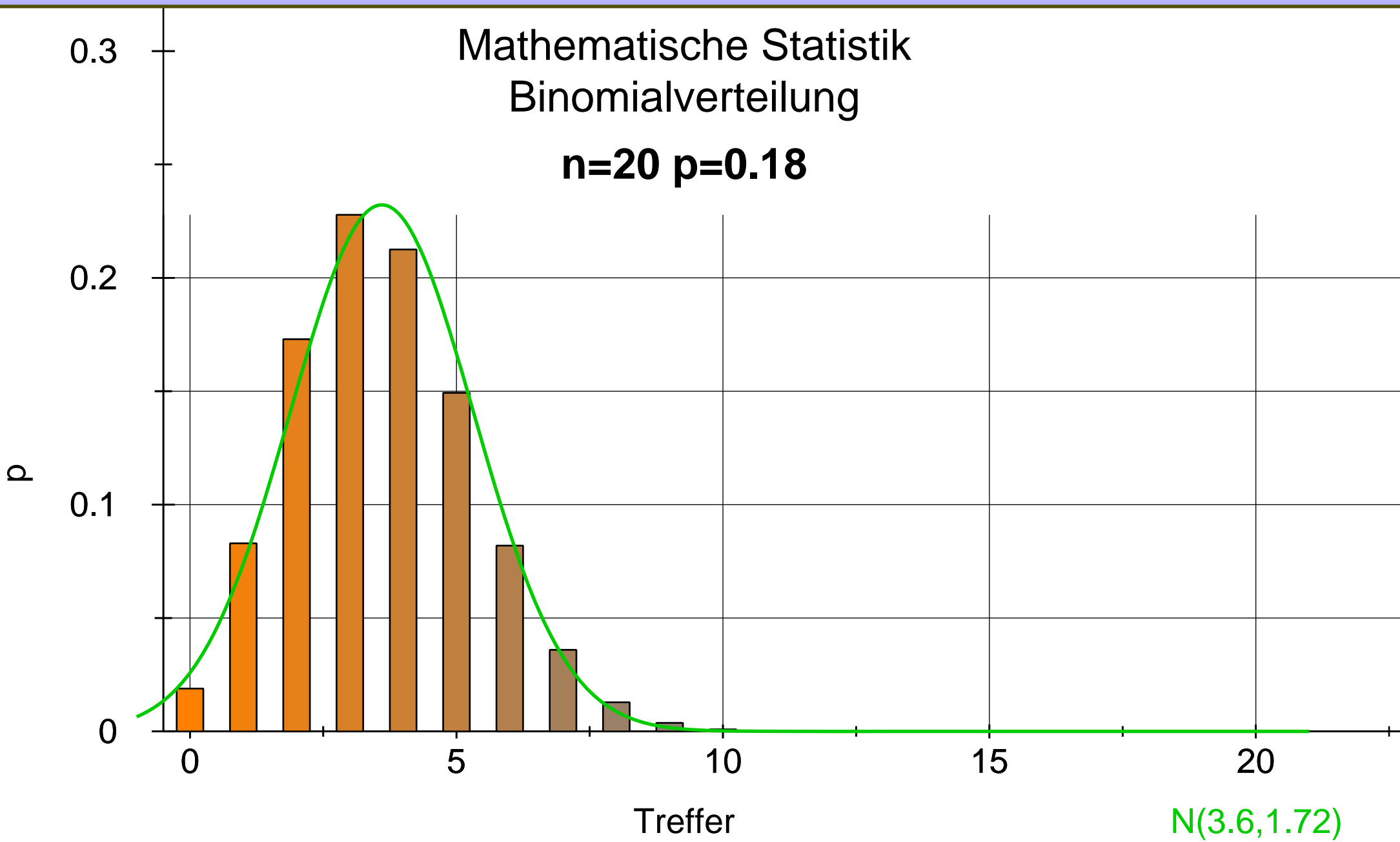
**n=20 p=0.16**



$N(3.2, 1.64)$

Mathematische Statistik  
Binomialverteilung

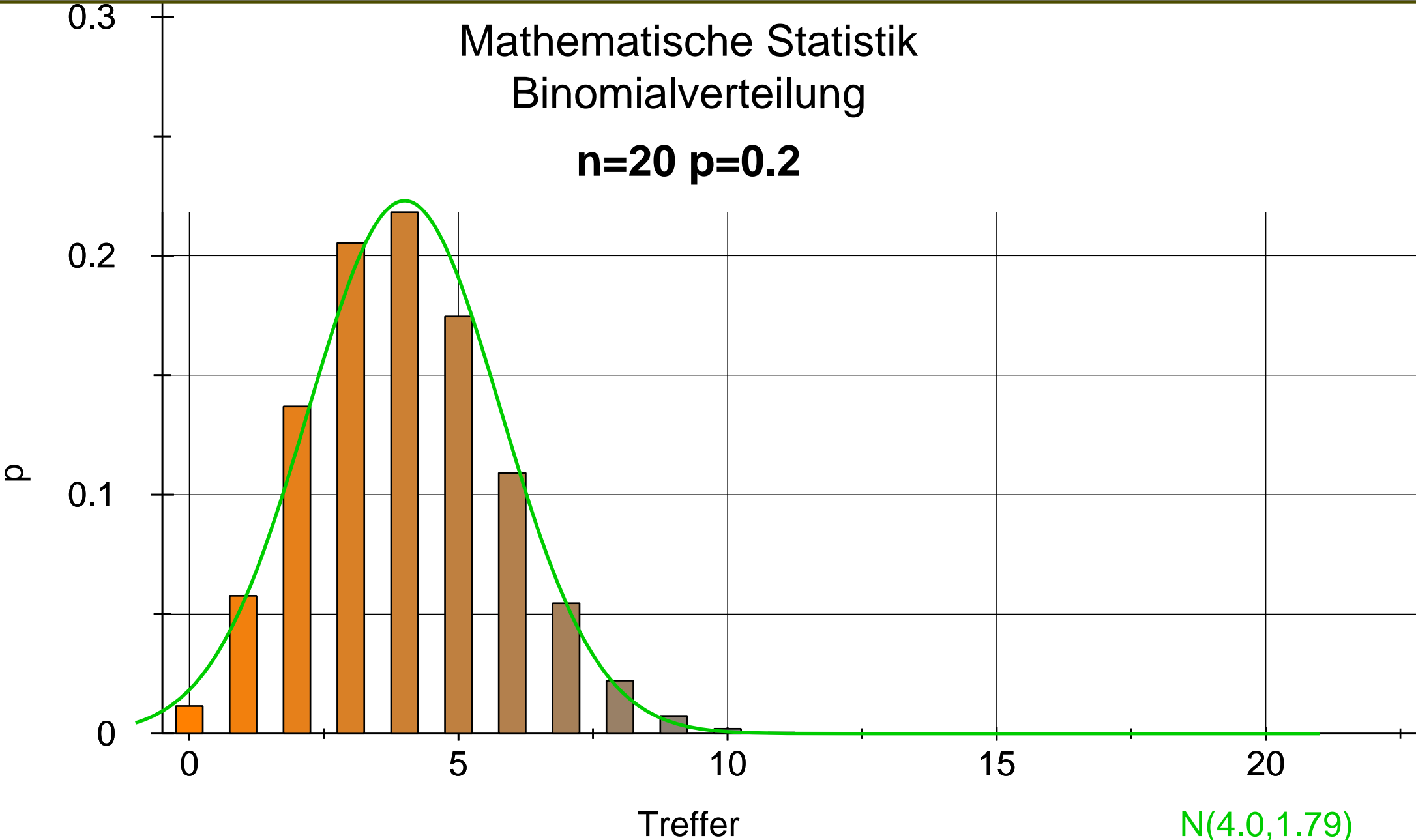
**n=20 p=0.18**



$N(3.6, 1.72)$

Mathematische Statistik  
Binomialverteilung

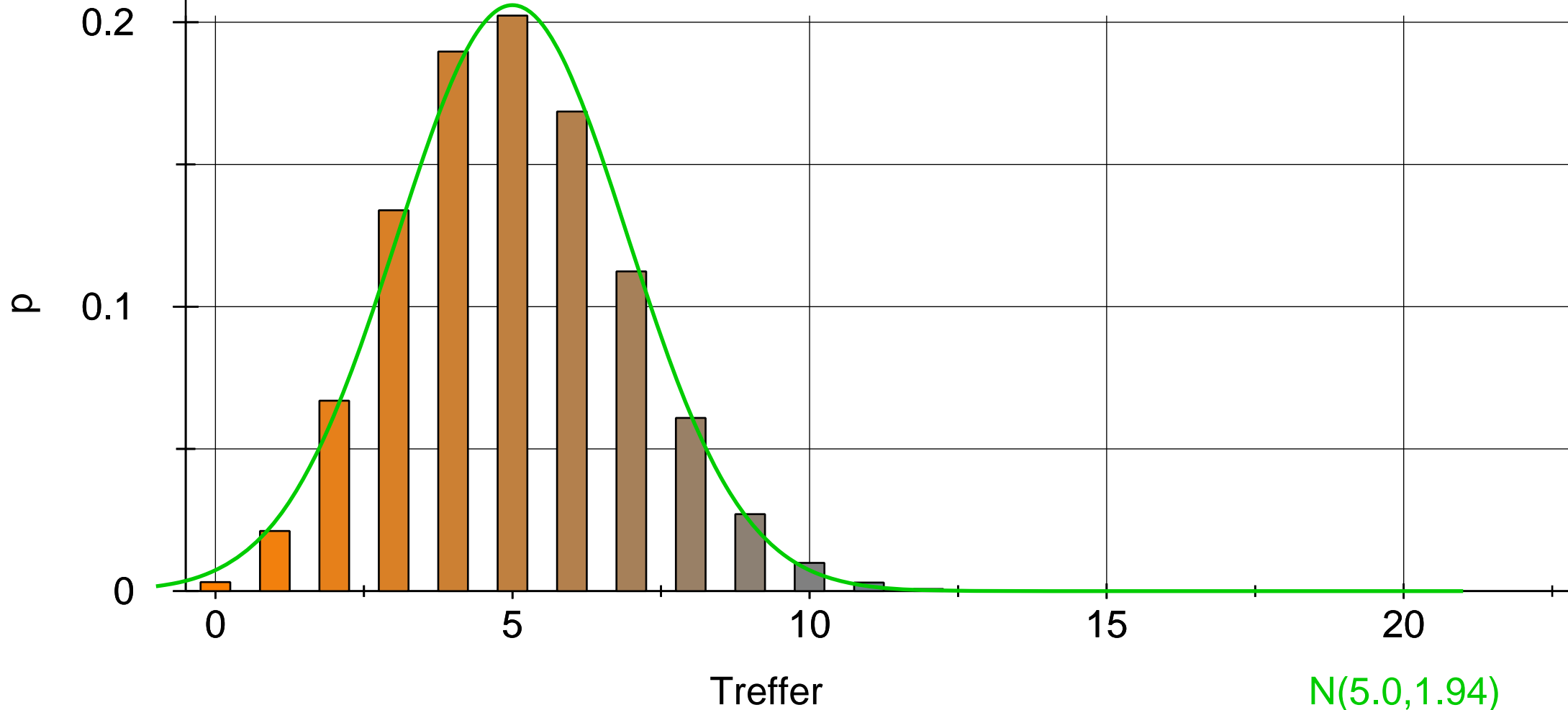
**n=20 p=0.2**



# Mathematische Statistik

## Binomialverteilung

**$n=20$   $p=0.25$**



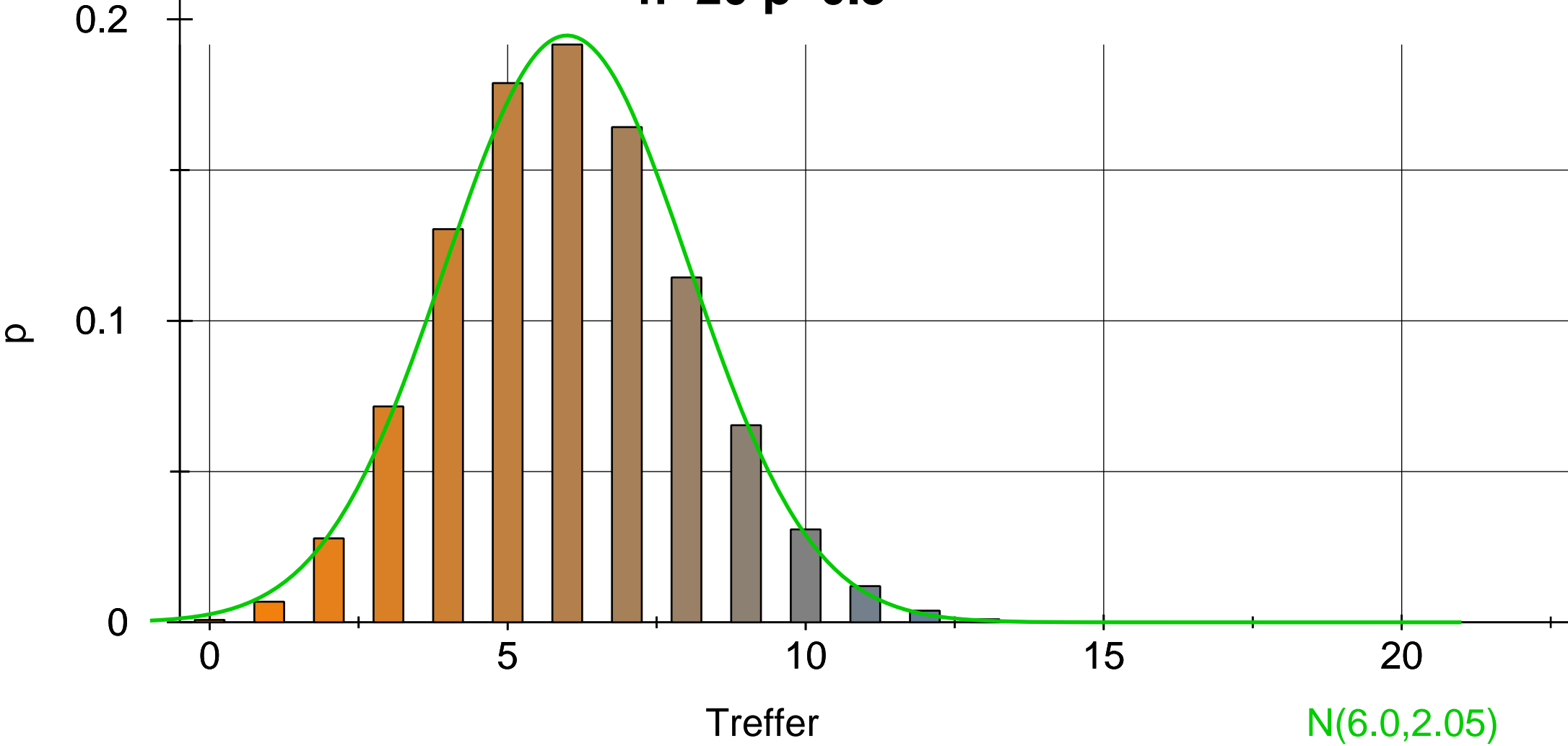
$N(5.0, 1.94)$



# Mathematische Statistik

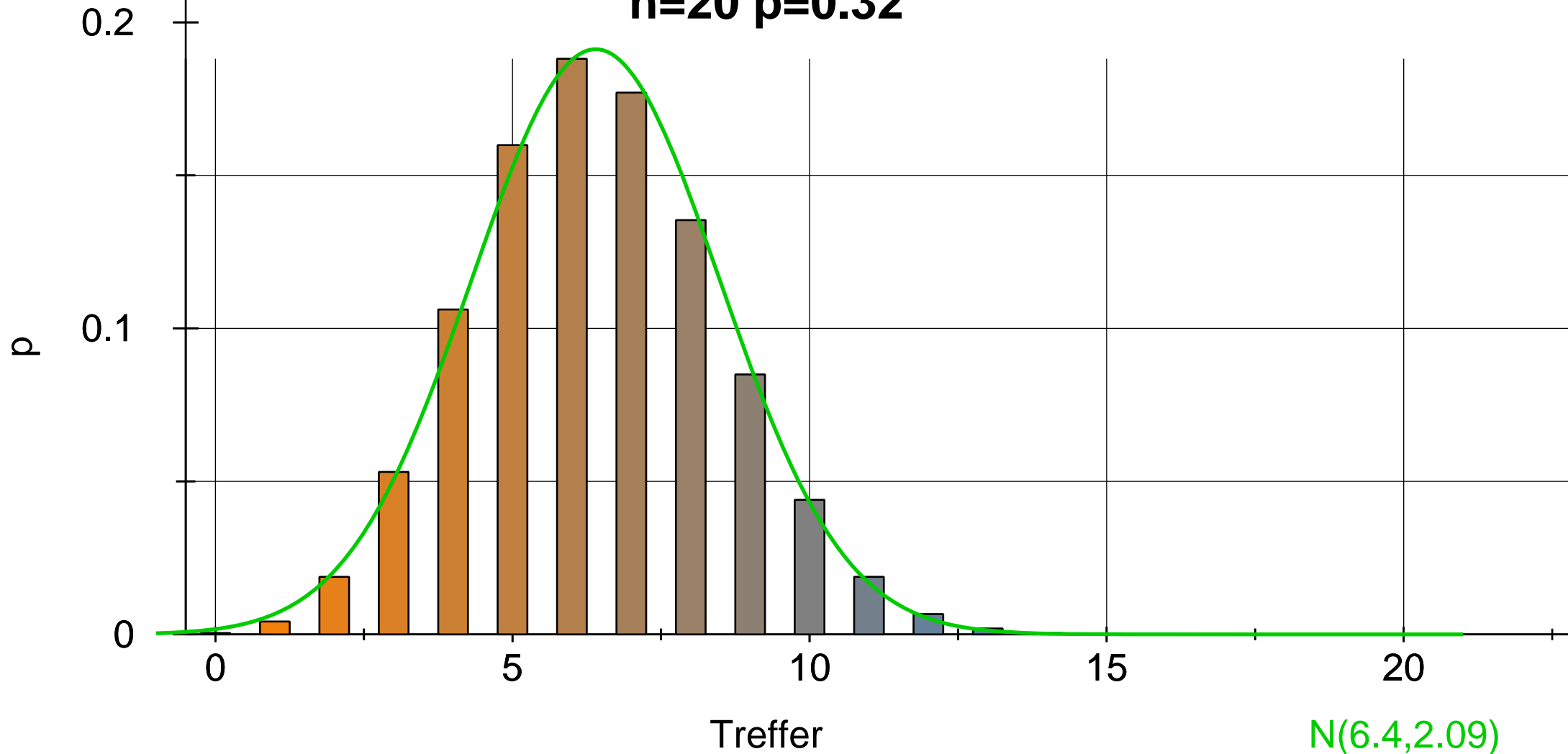
## Binomialverteilung

**n=20 p=0.3**



# Mathematische Statistik Binomialverteilung

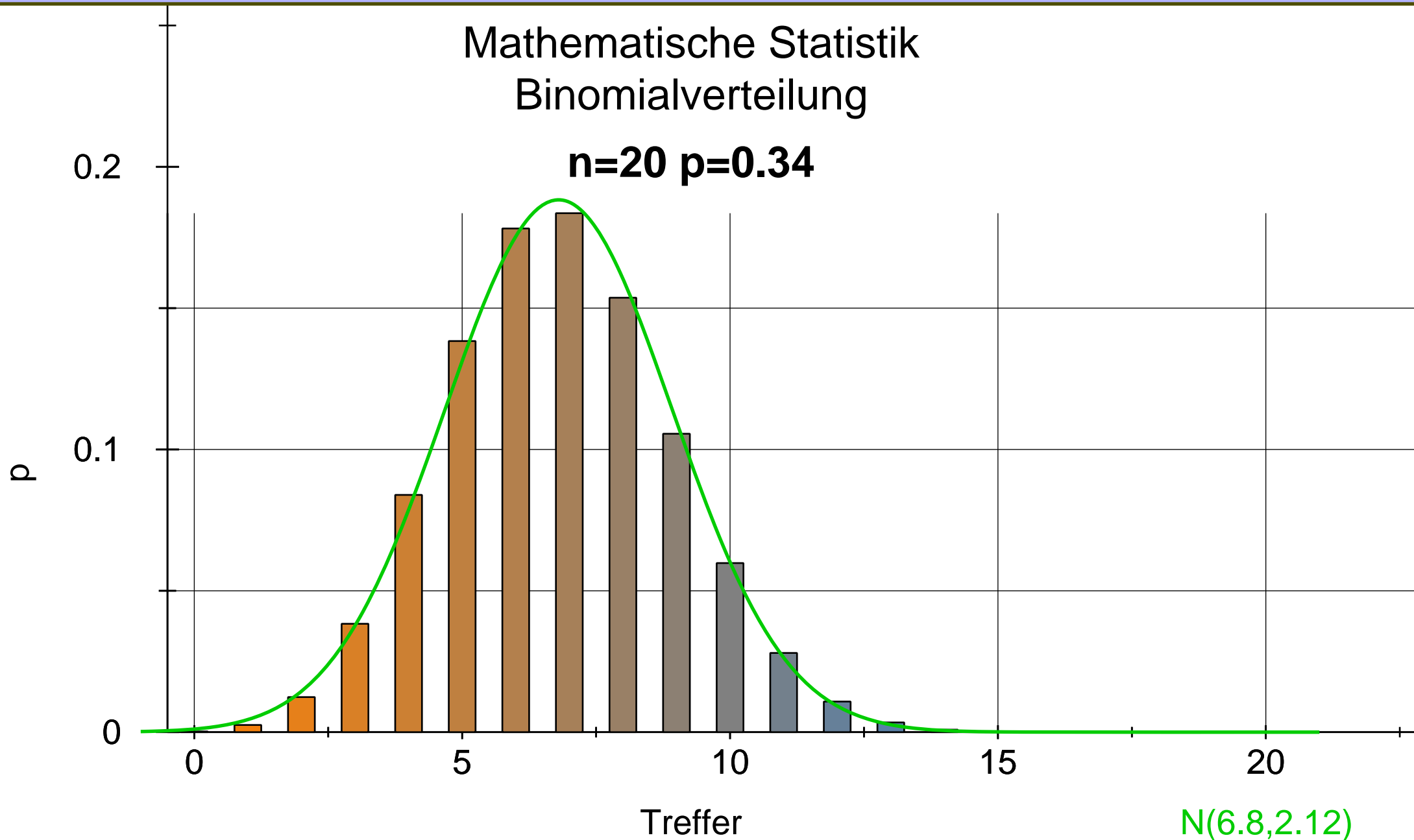
**n=20 p=0.32**



$N(6.4, 2.09)$

# Mathematische Statistik Binomialverteilung

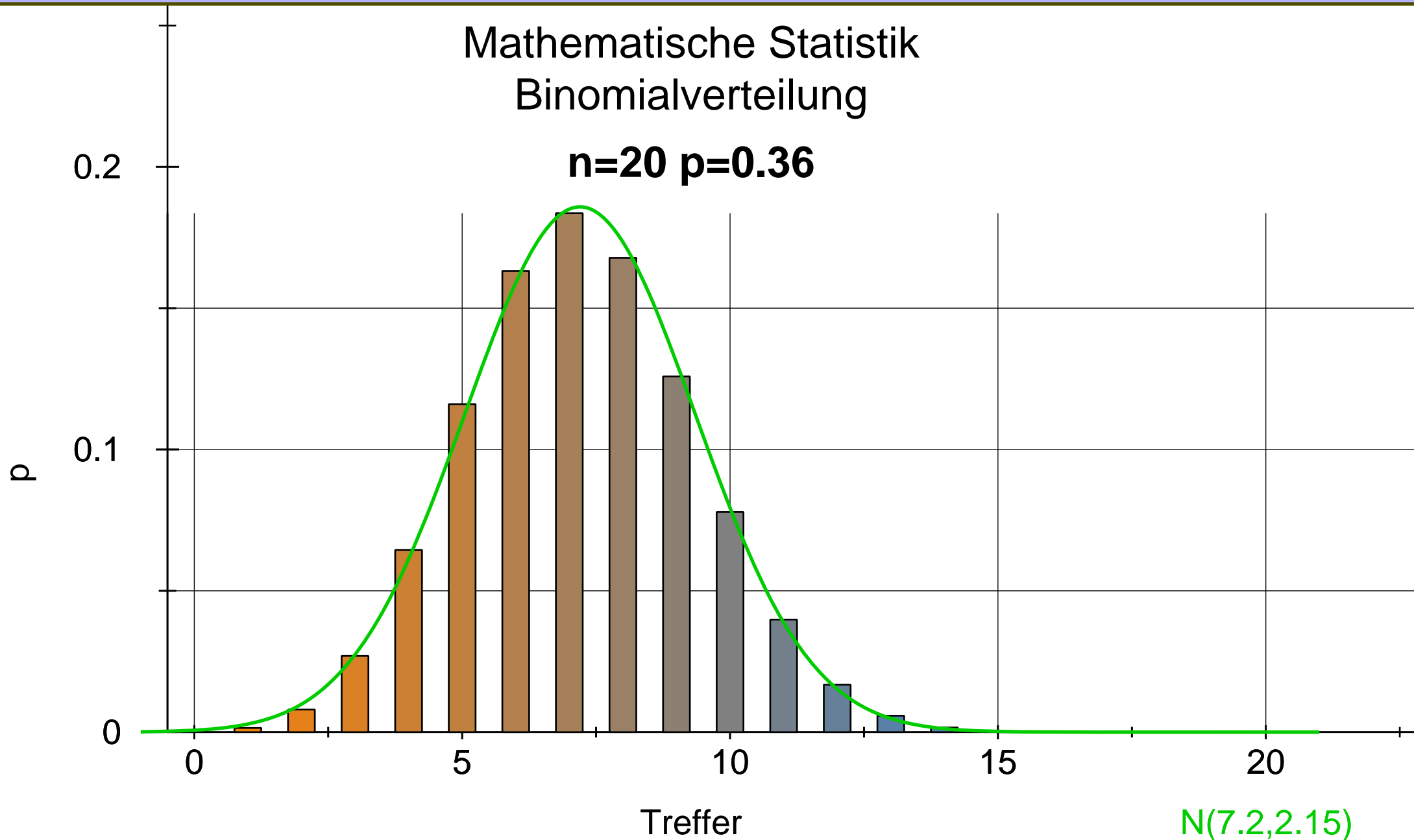
**n=20 p=0.34**



$N(6.8, 2.12)$

# Mathematische Statistik Binomialverteilung

**n=20 p=0.36**

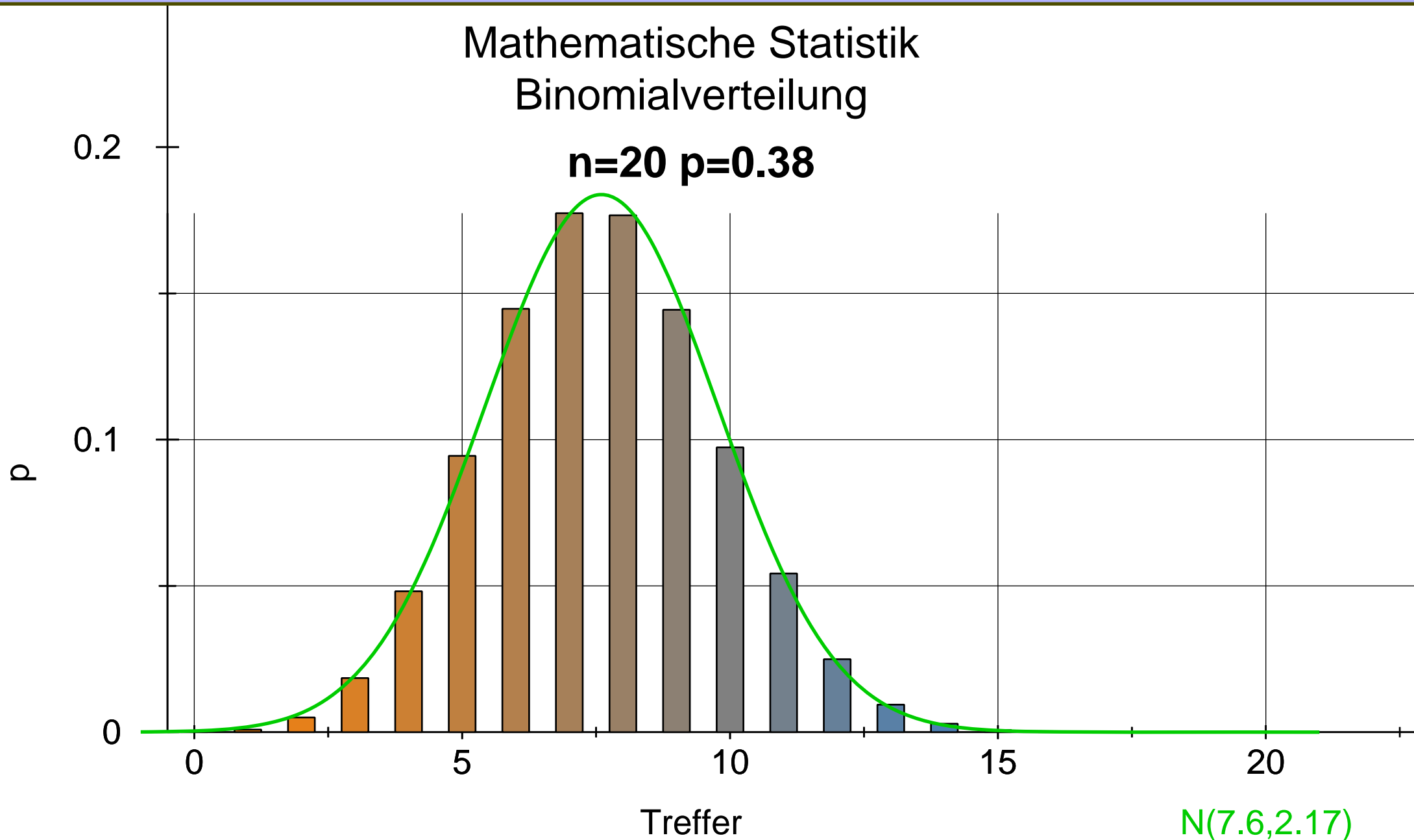


$N(7.2, 2.15)$

# Mathematische Statistik

## Binomialverteilung

**n=20 p=0.38**

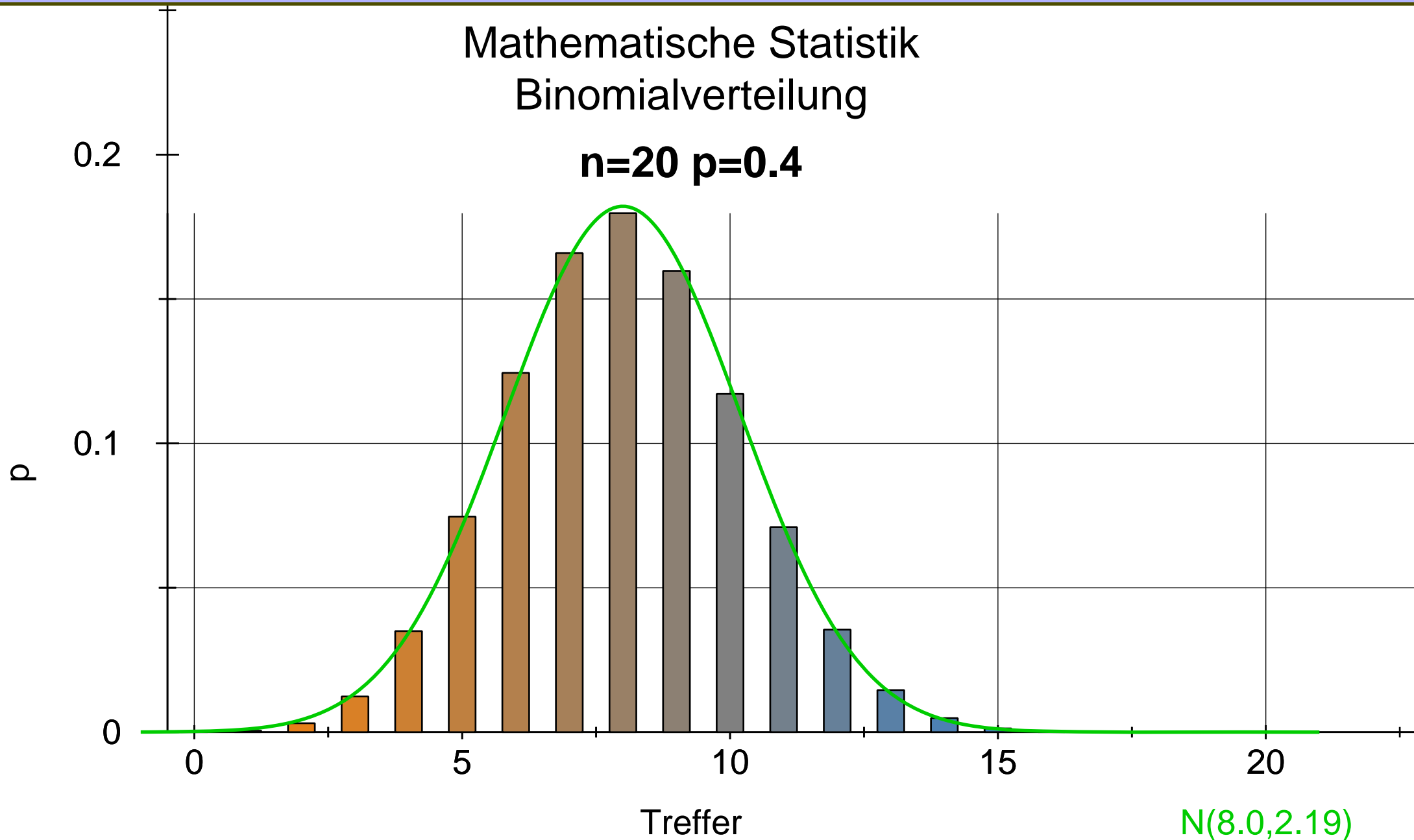


$N(7.6, 2.17)$

# Mathematische Statistik

## Binomialverteilung

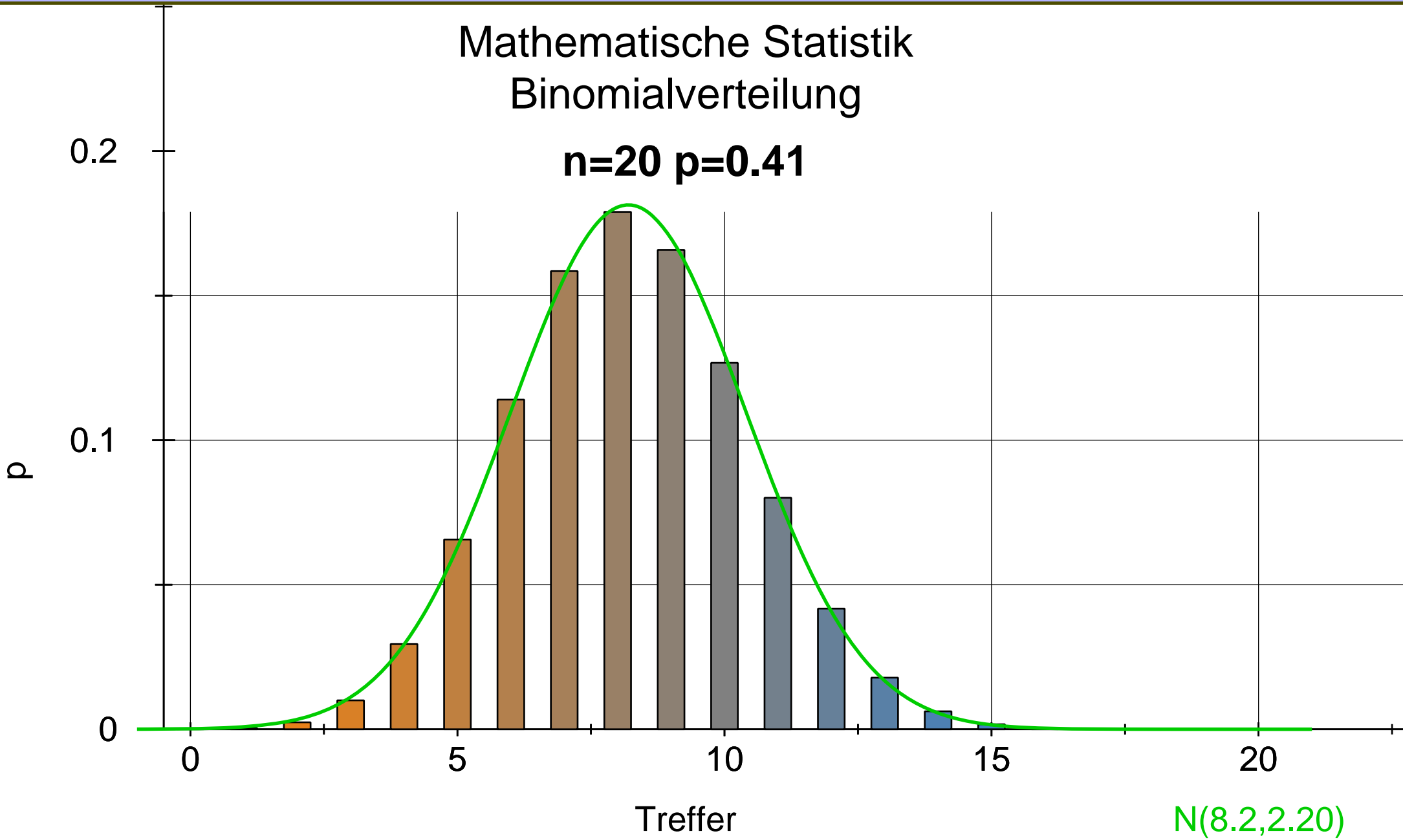
**n=20 p=0.4**



$N(8.0, 2.19)$

Mathematische Statistik  
Binomialverteilung

**n=20 p=0.41**

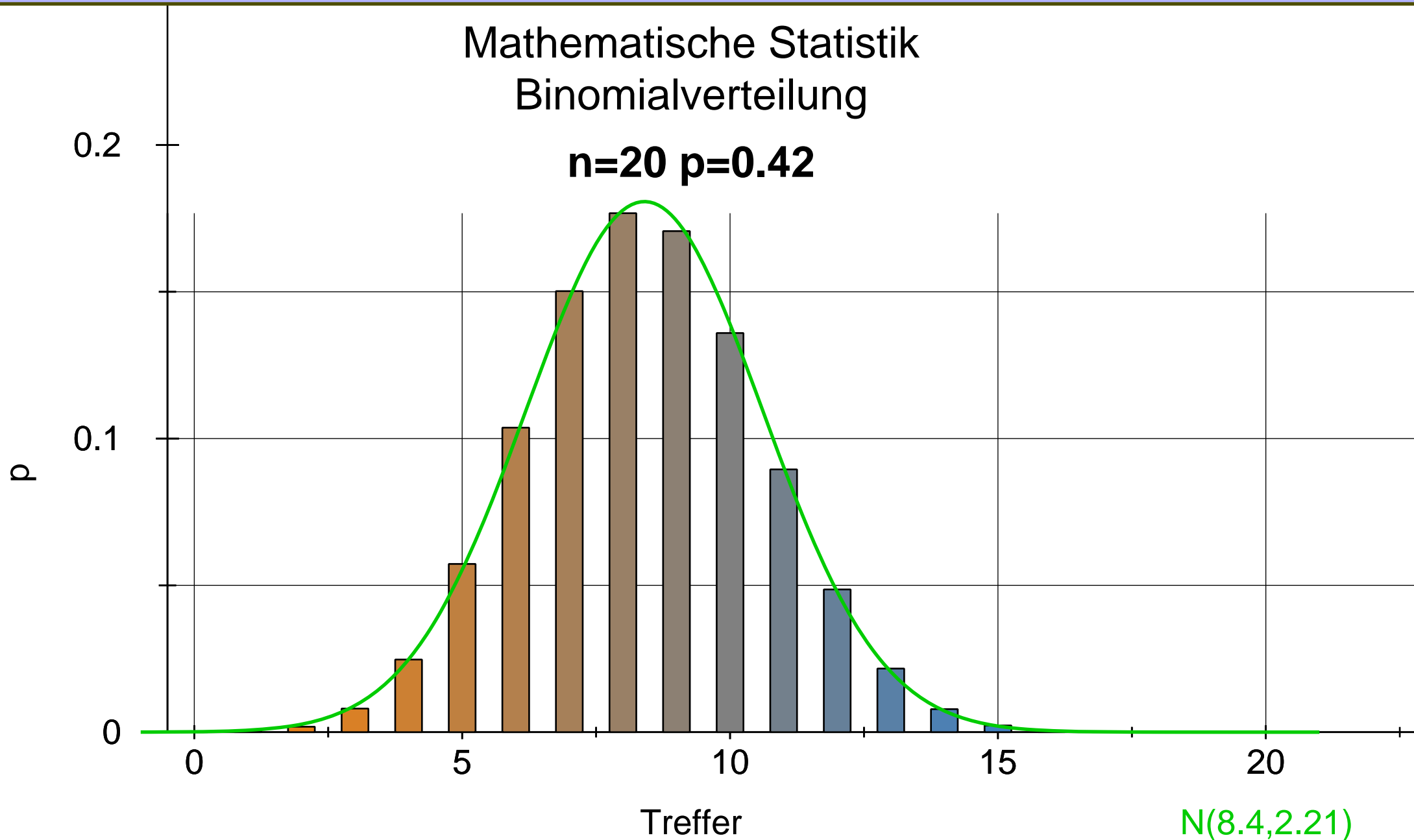


$N(8.2, 2.20)$

# Mathematische Statistik

## Binomialverteilung

**n=20 p=0.42**



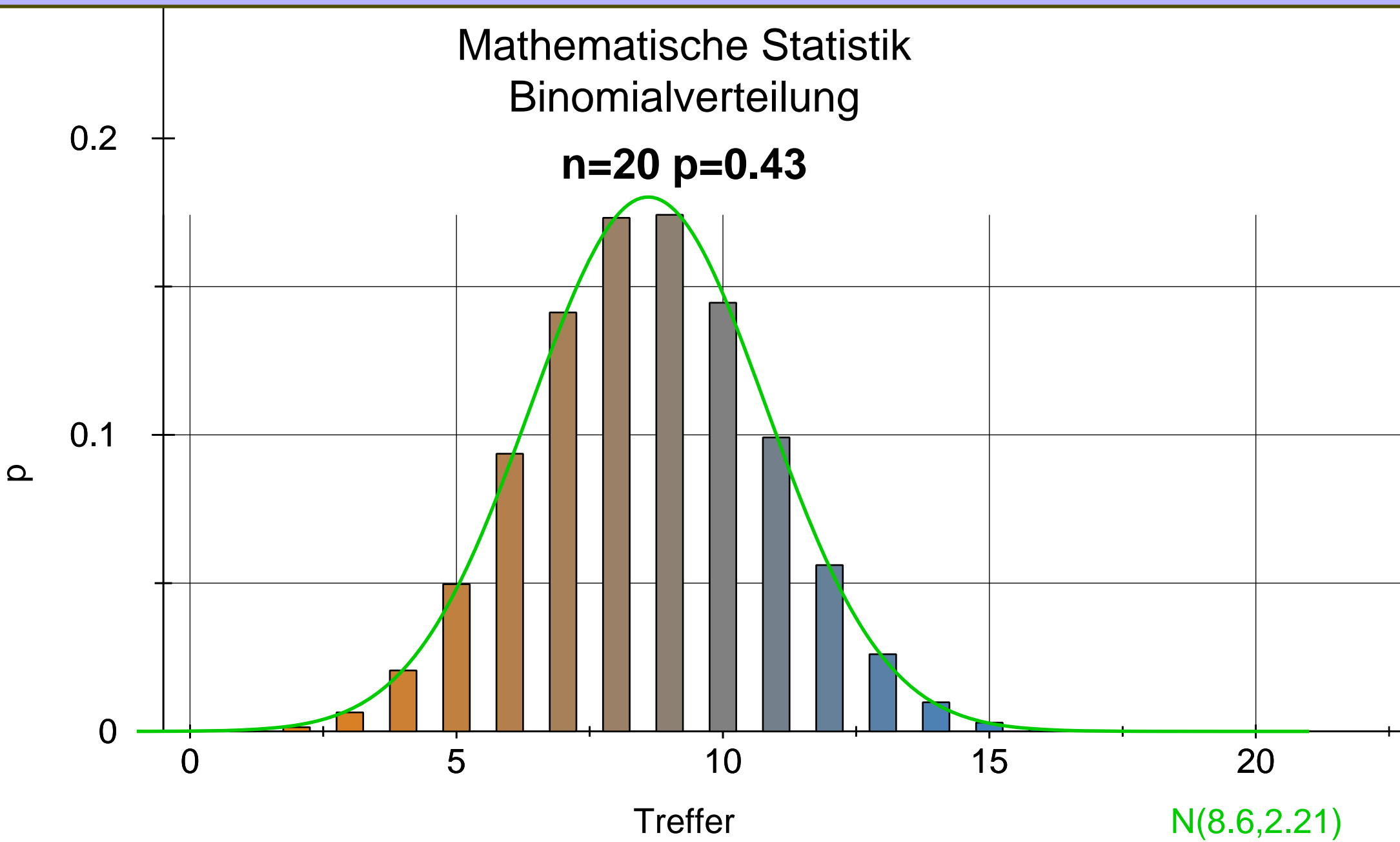
$N(8.4, 2.21)$



# Mathematische Statistik

## Binomialverteilung

**n=20 p=0.43**

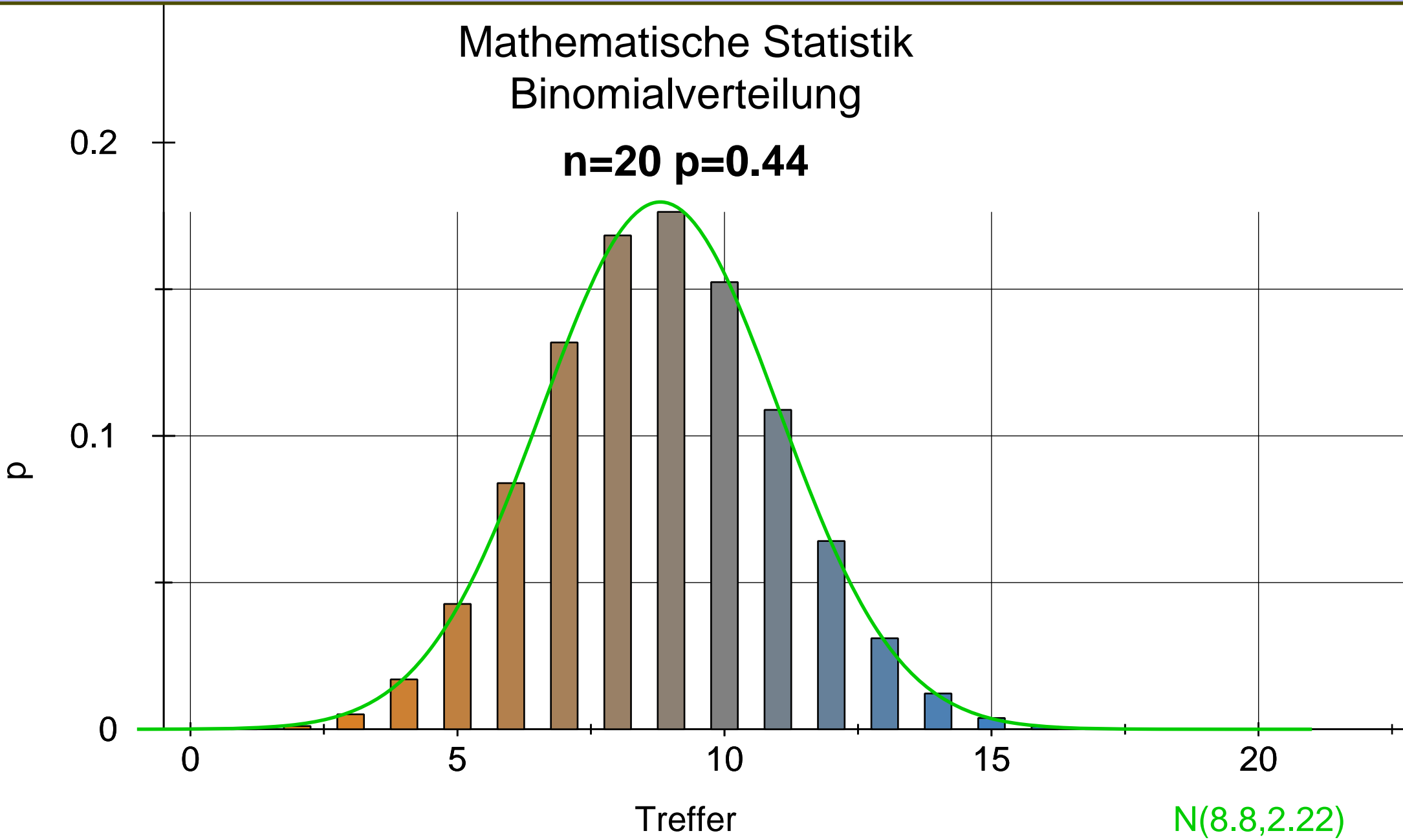


N(8.6, 2.21)

# Mathematische Statistik

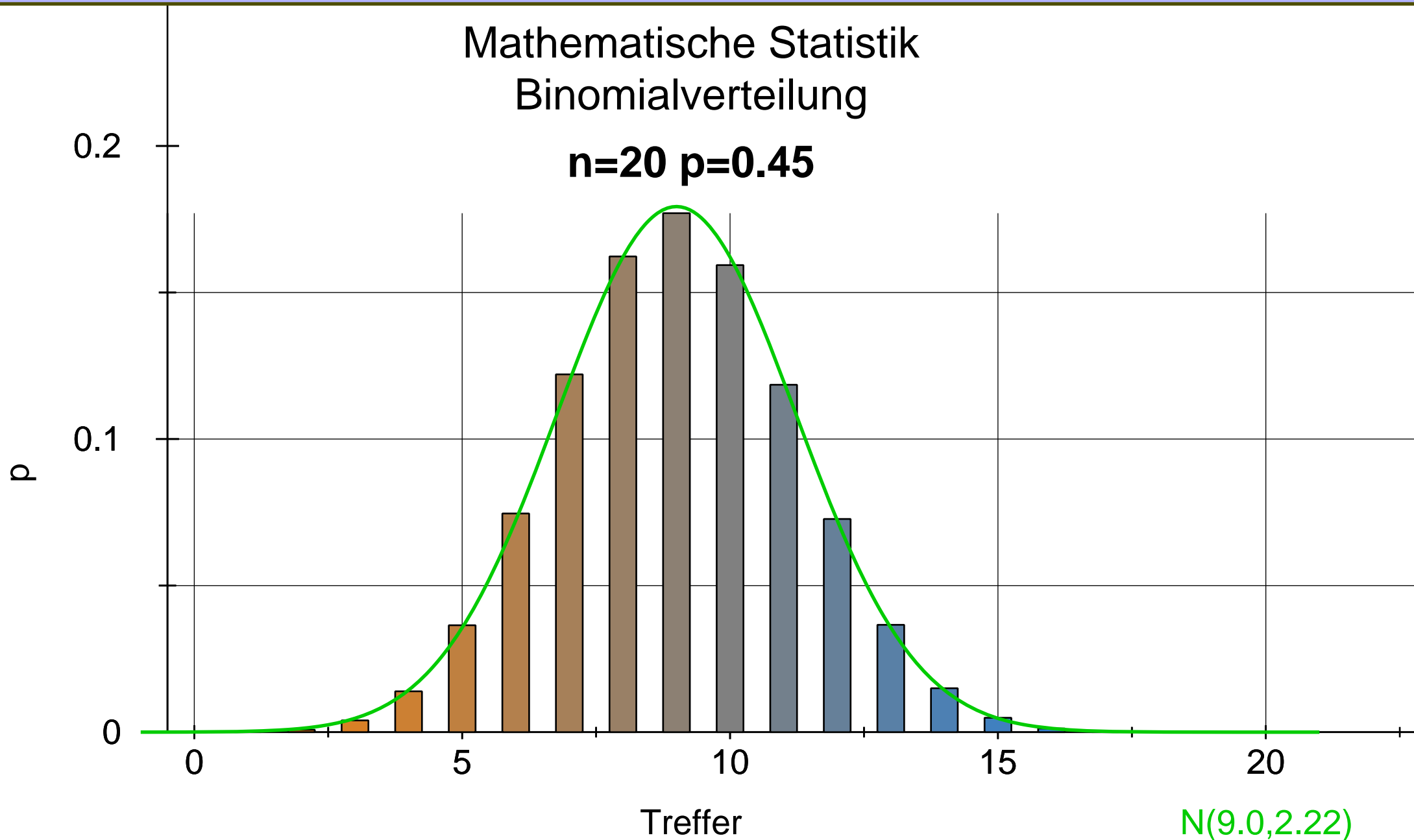
## Binomialverteilung

**n=20 p=0.44**



# Mathematische Statistik Binomialverteilung

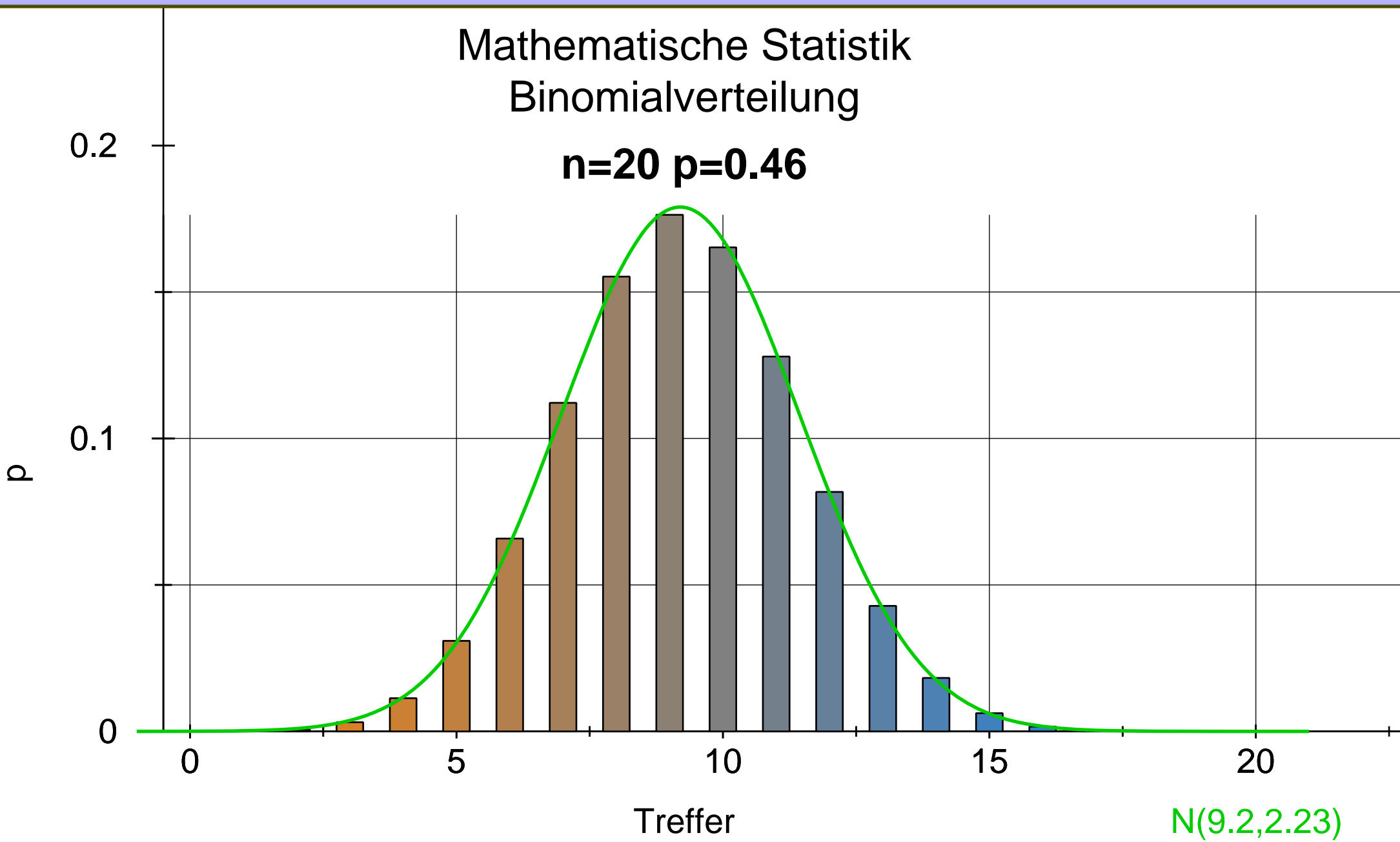
**n=20 p=0.45**



$N(9.0, 2.22)$

# Mathematische Statistik Binomialverteilung

**n=20 p=0.46**

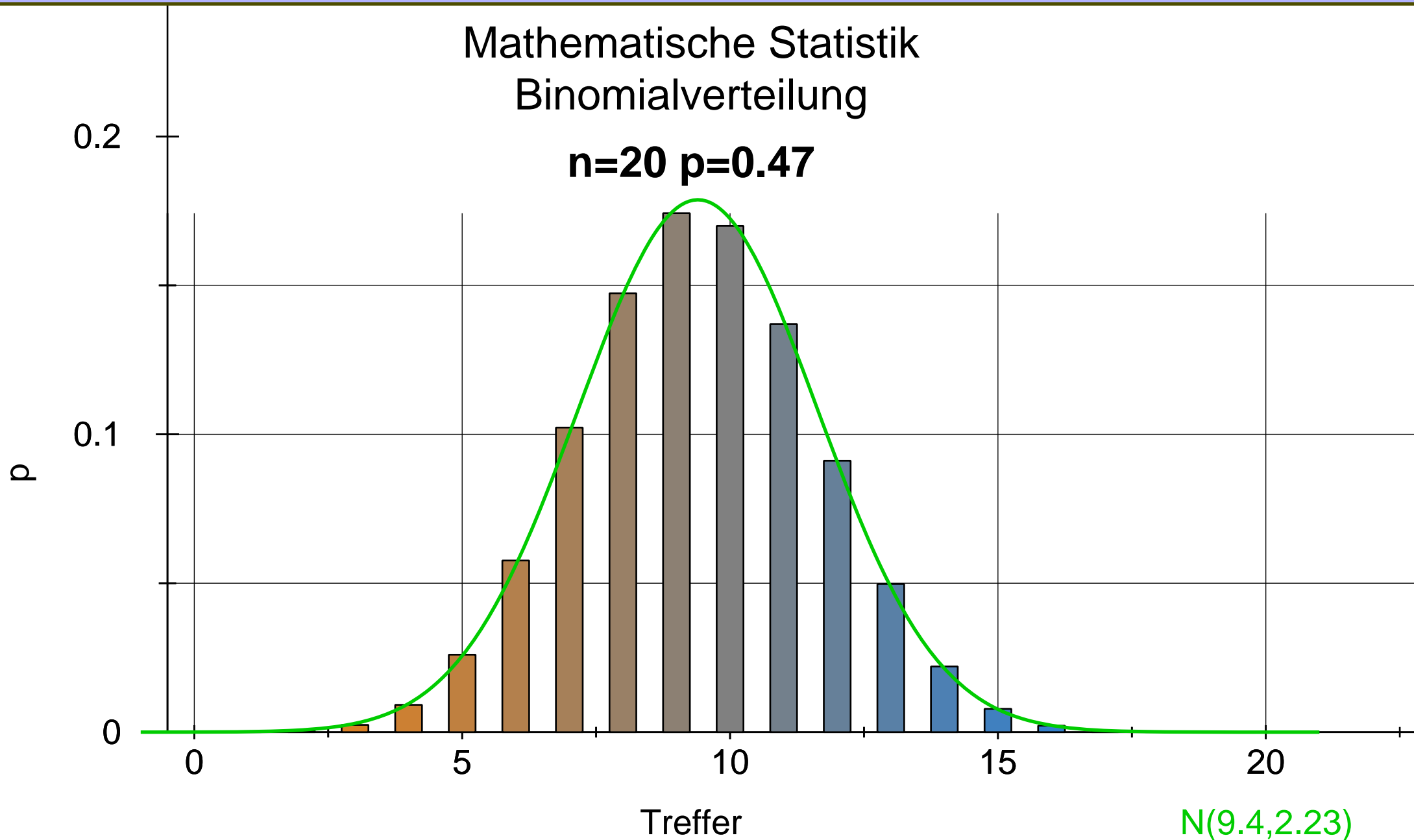


$N(9.2, 2.23)$

# Mathematische Statistik

## Binomialverteilung

**n=20 p=0.47**

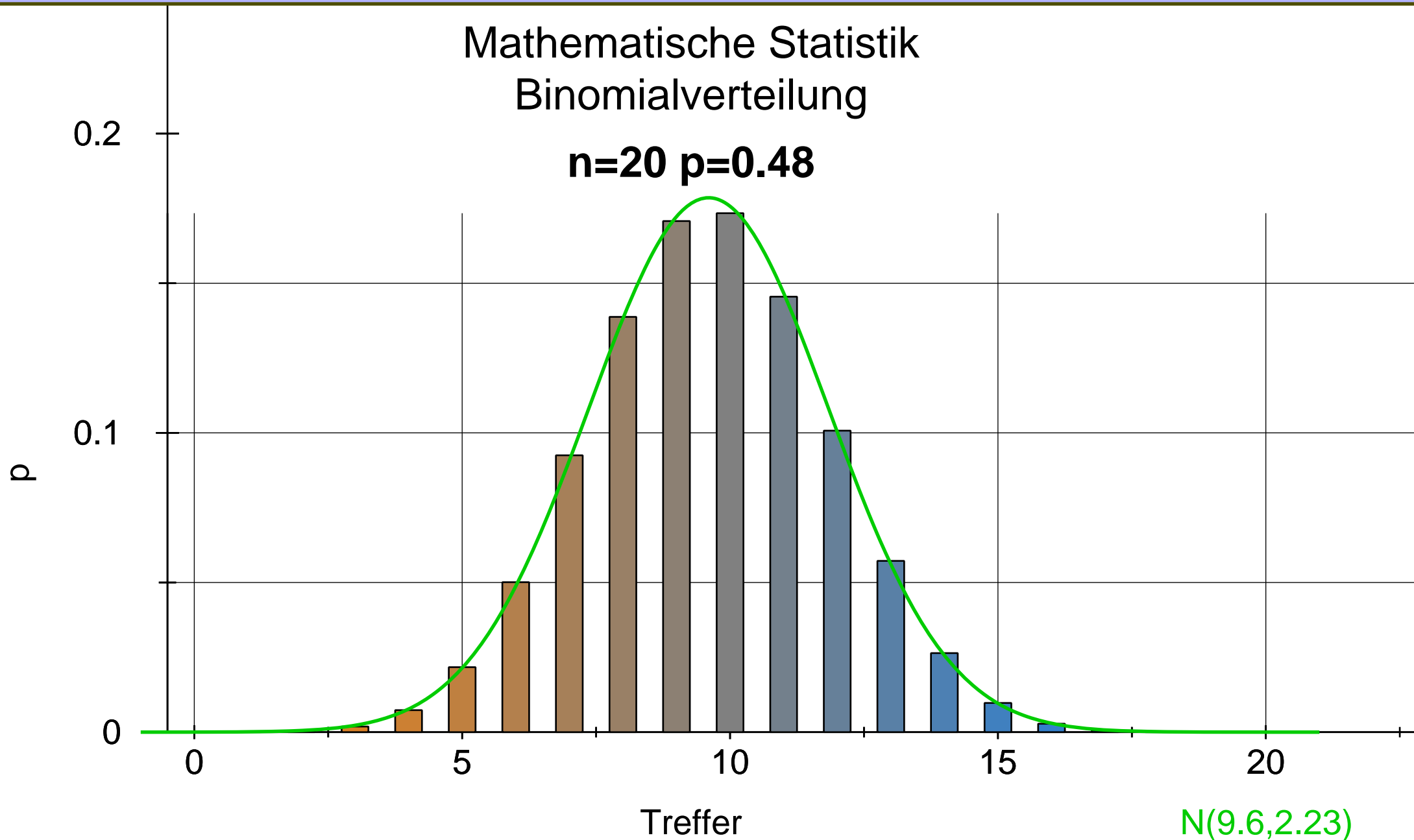


$N(9.4, 2.23)$

# Mathematische Statistik

## Binomialverteilung

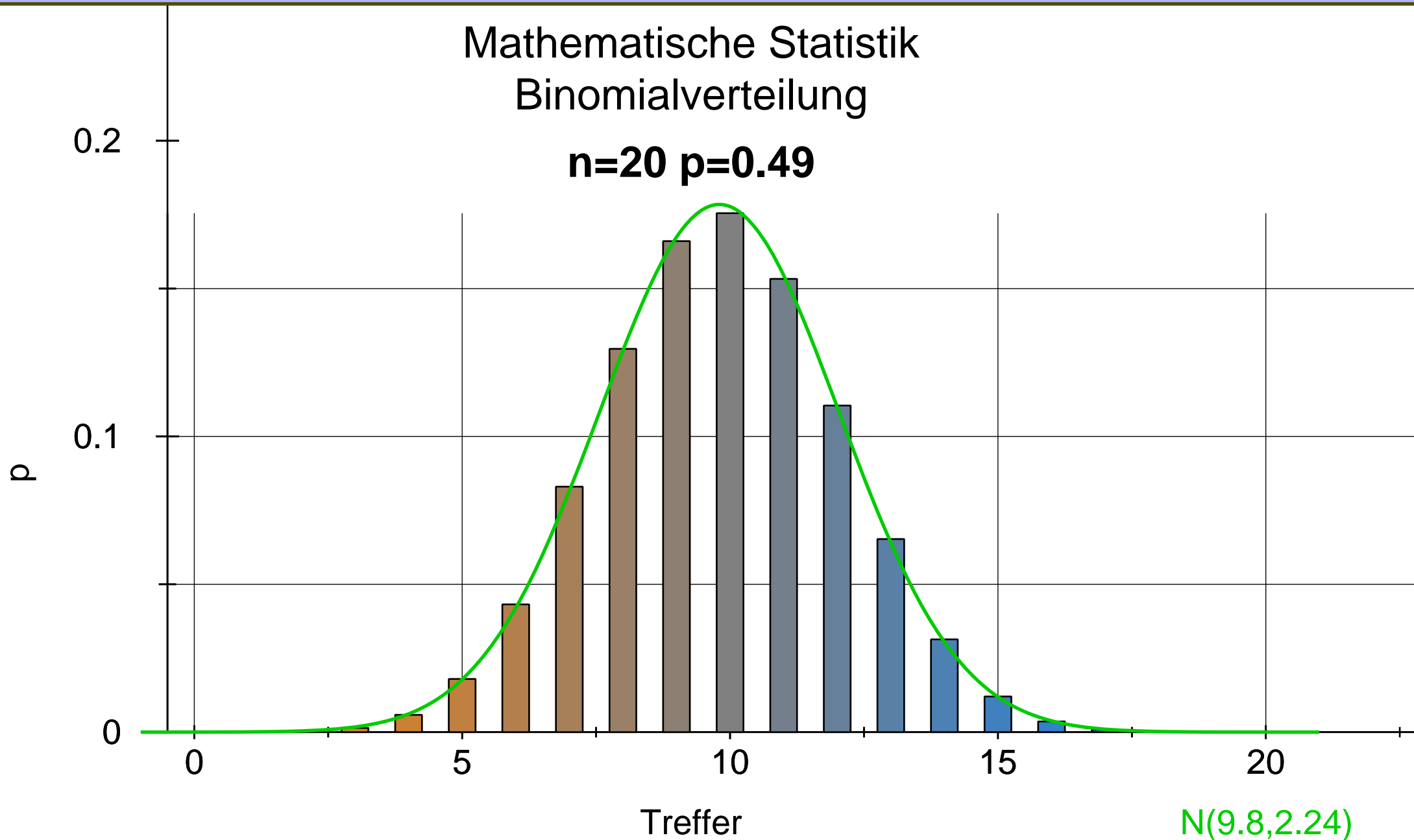
**n=20 p=0.48**



$N(9.6, 2.23)$

# Mathematische Statistik Binomialverteilung

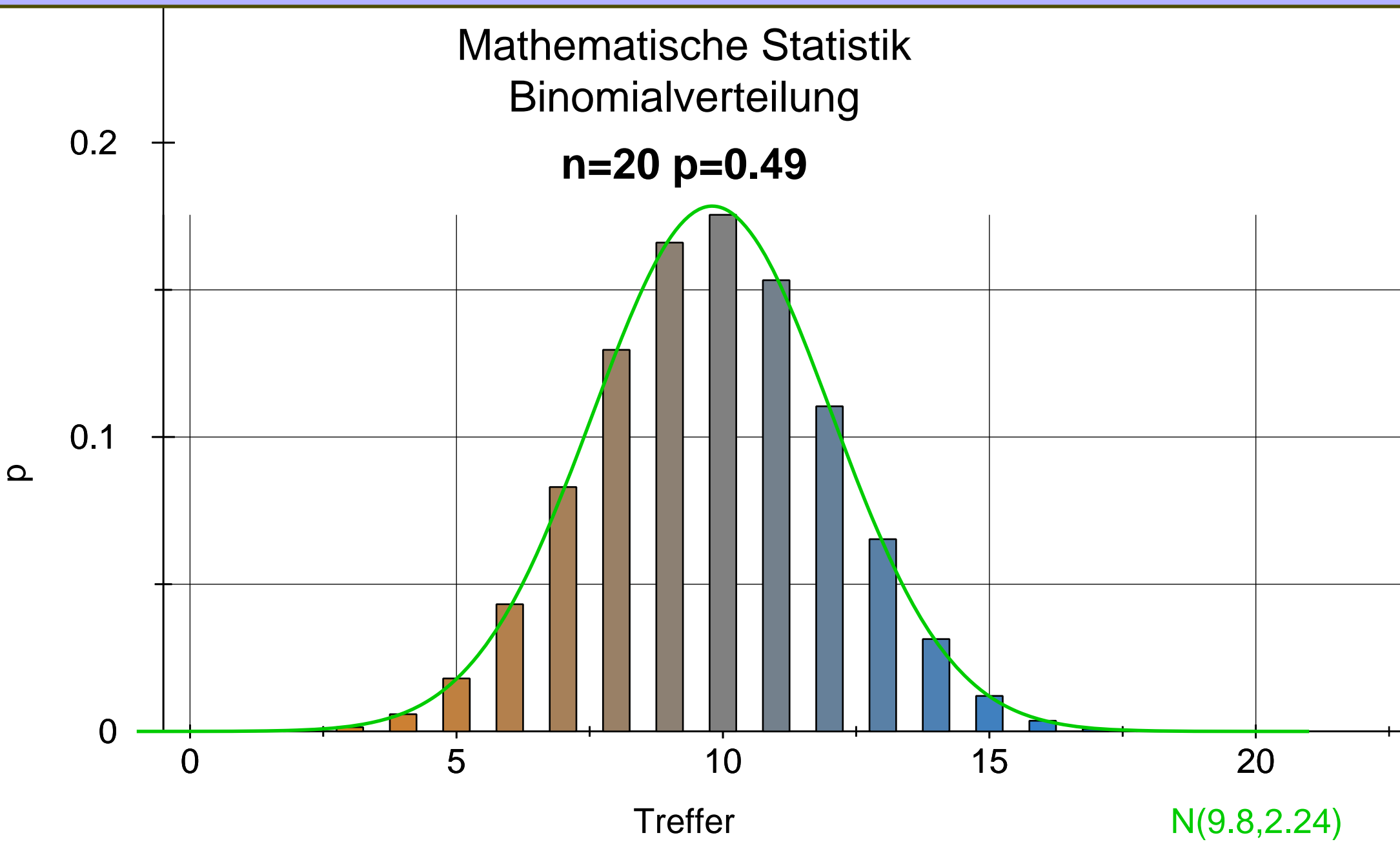
**n=20 p=0.49**



$N(9.8, 2.24)$

Mathematische Statistik  
Binomialverteilung

**n=20 p=0.49**

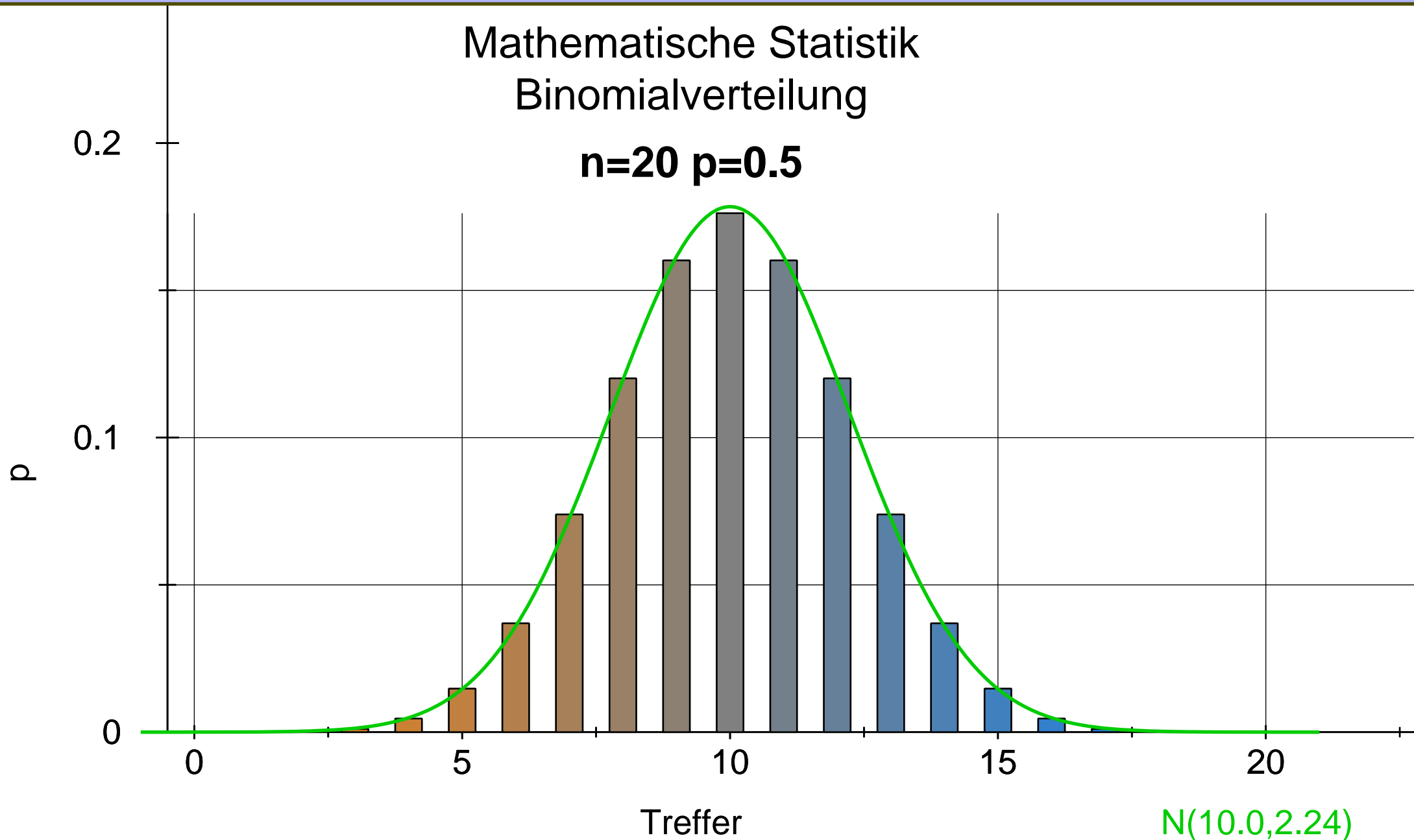


$N(9.8, 2.24)$



# Mathematische Statistik Binomialverteilung

**n=20 p=0.5**

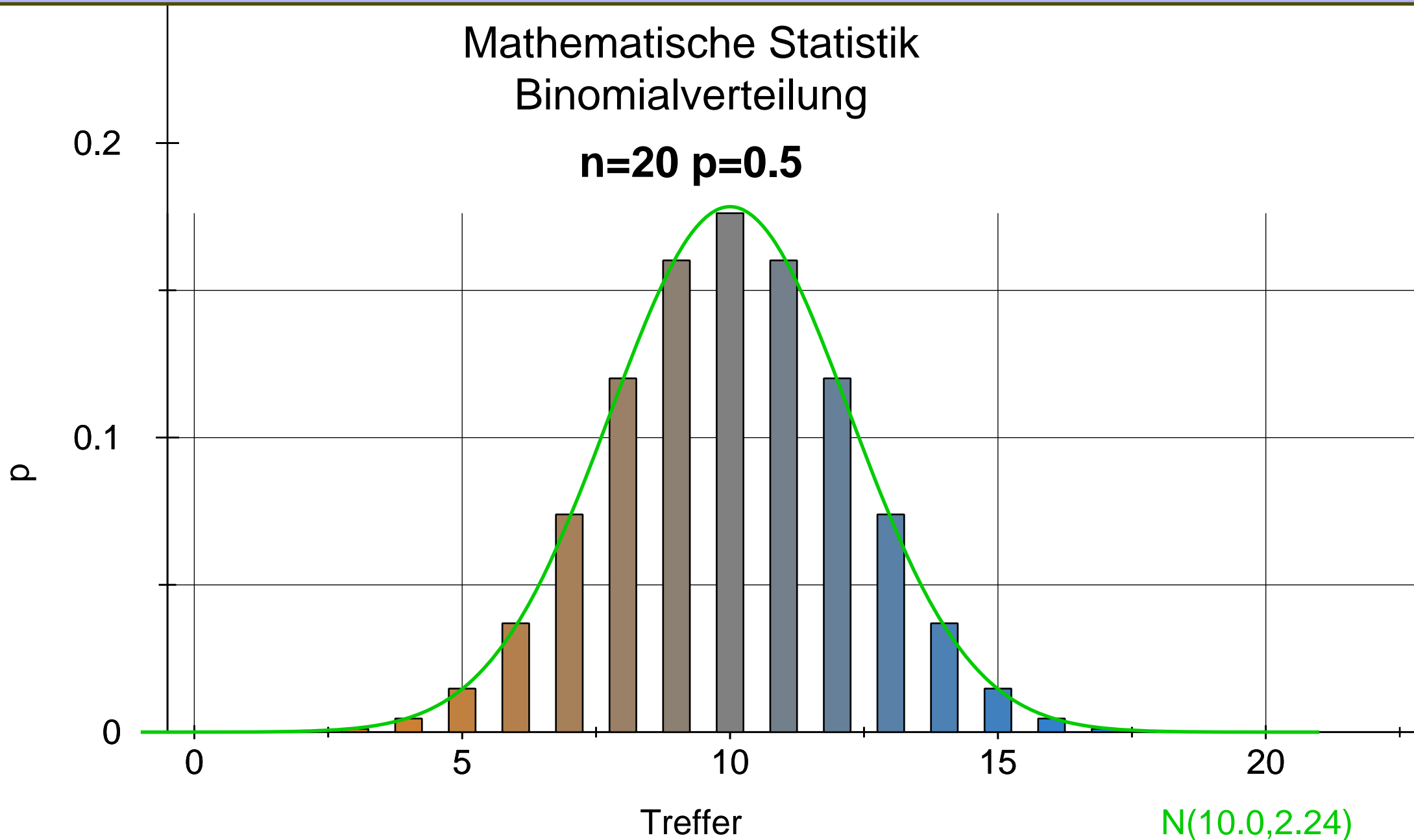


$N(10.0, 2.24)$

# Mathematische Statistik

## Binomialverteilung

**n=20 p=0.5**

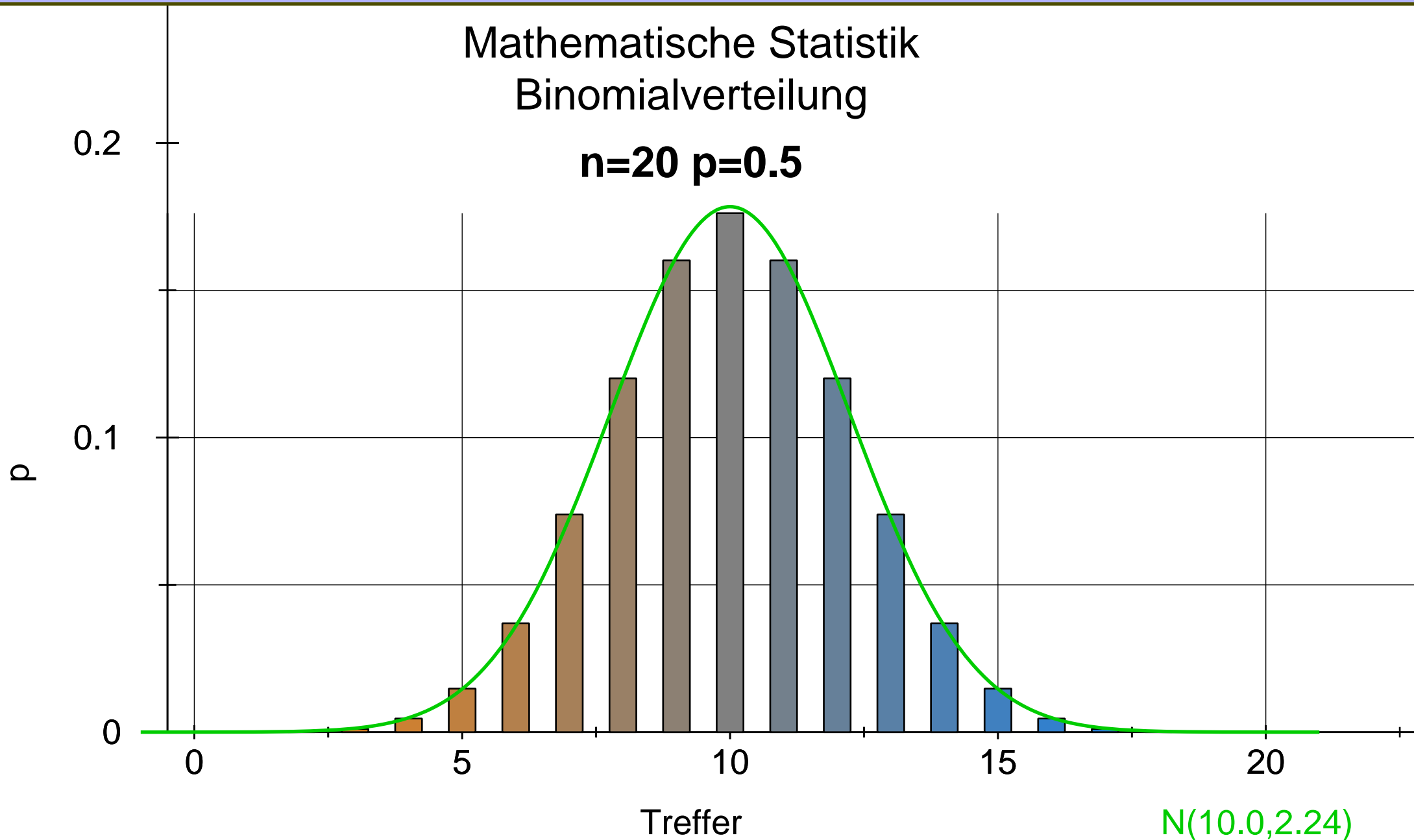


$N(10.0, 2.24)$

# Mathematische Statistik

## Binomialverteilung

**n=20 p=0.5**

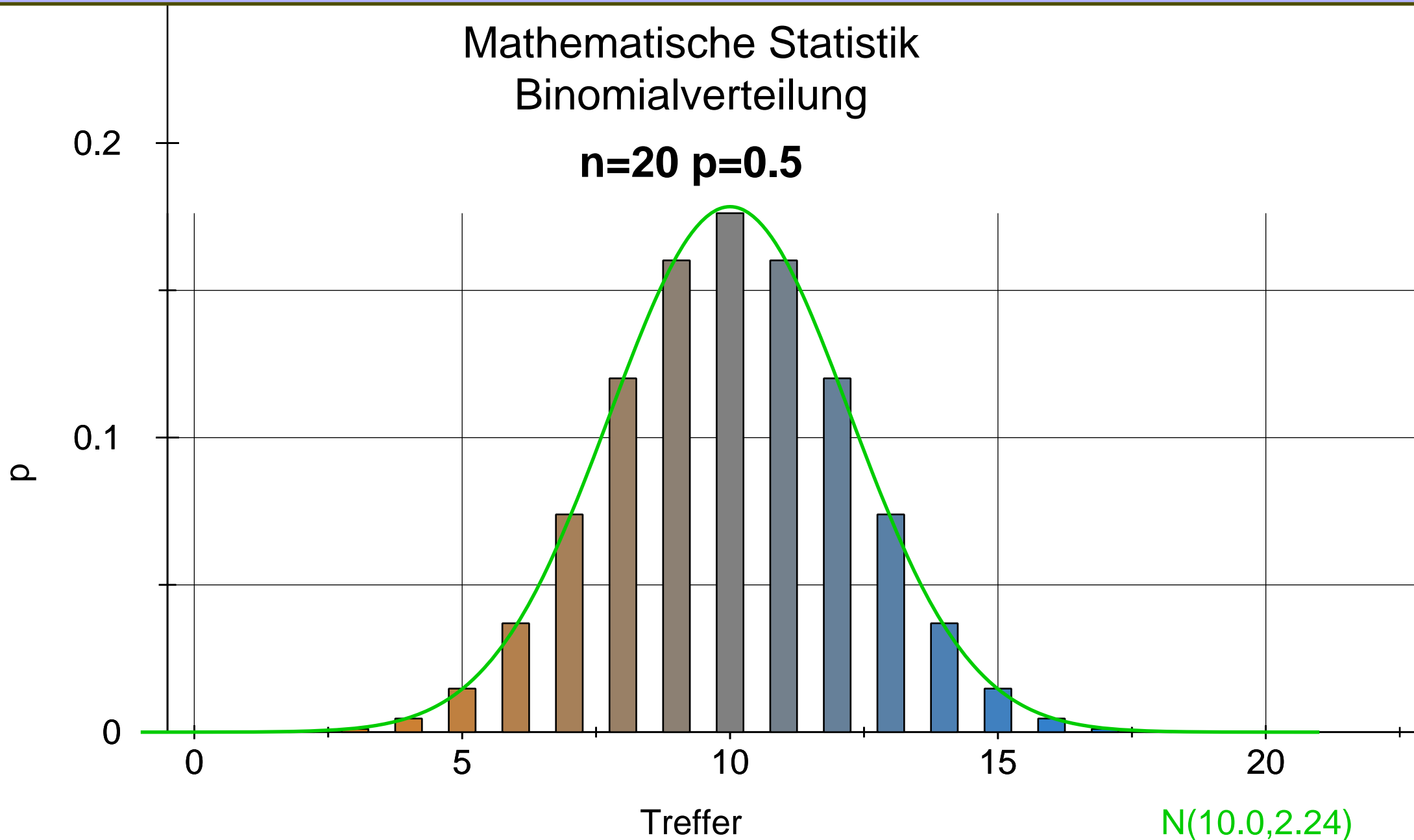


$N(10.0, 2.24)$

# Mathematische Statistik

## Binomialverteilung

**n=20 p=0.5**

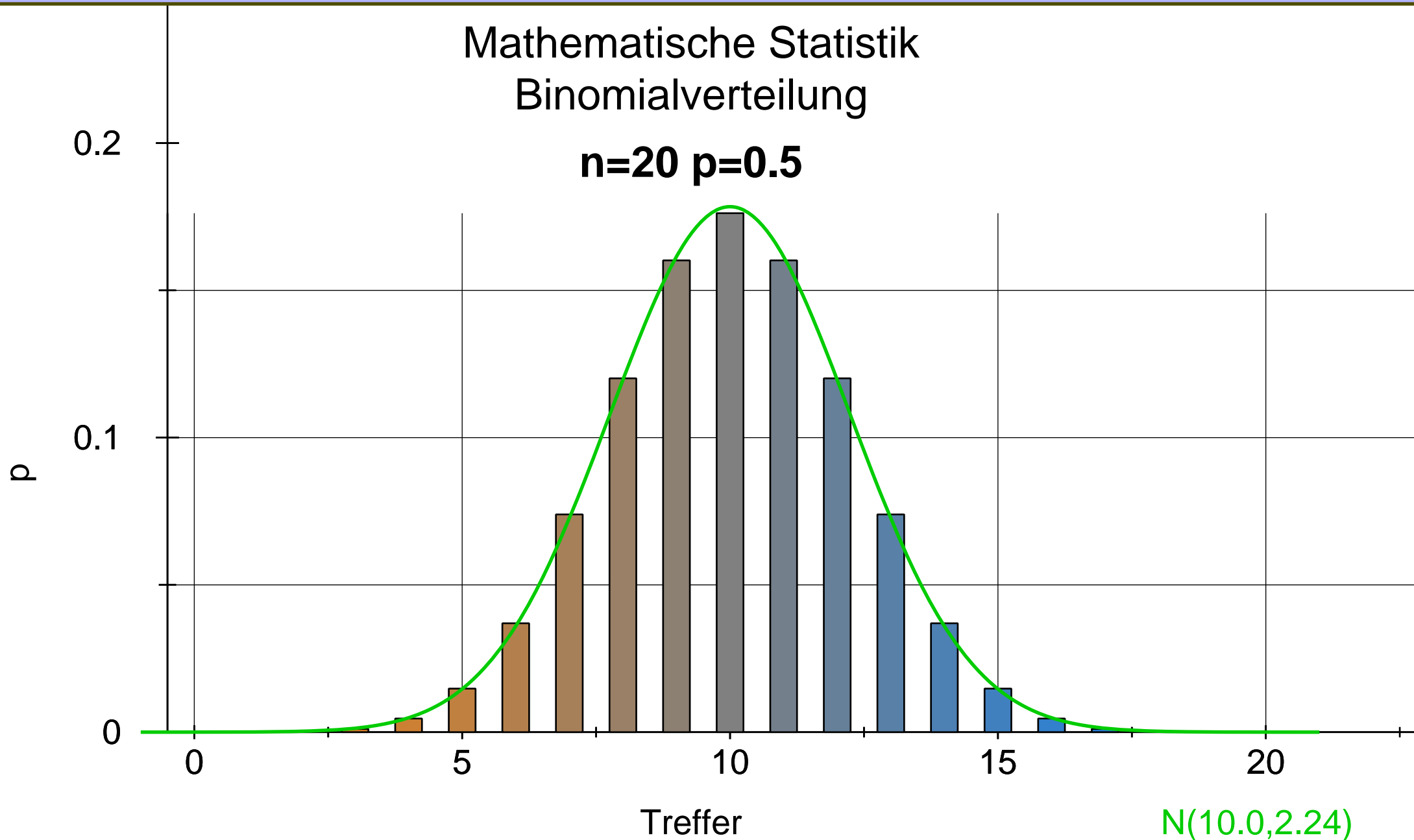


$N(10.0, 2.24)$

# Mathematische Statistik

## Binomialverteilung

**n=20 p=0.5**

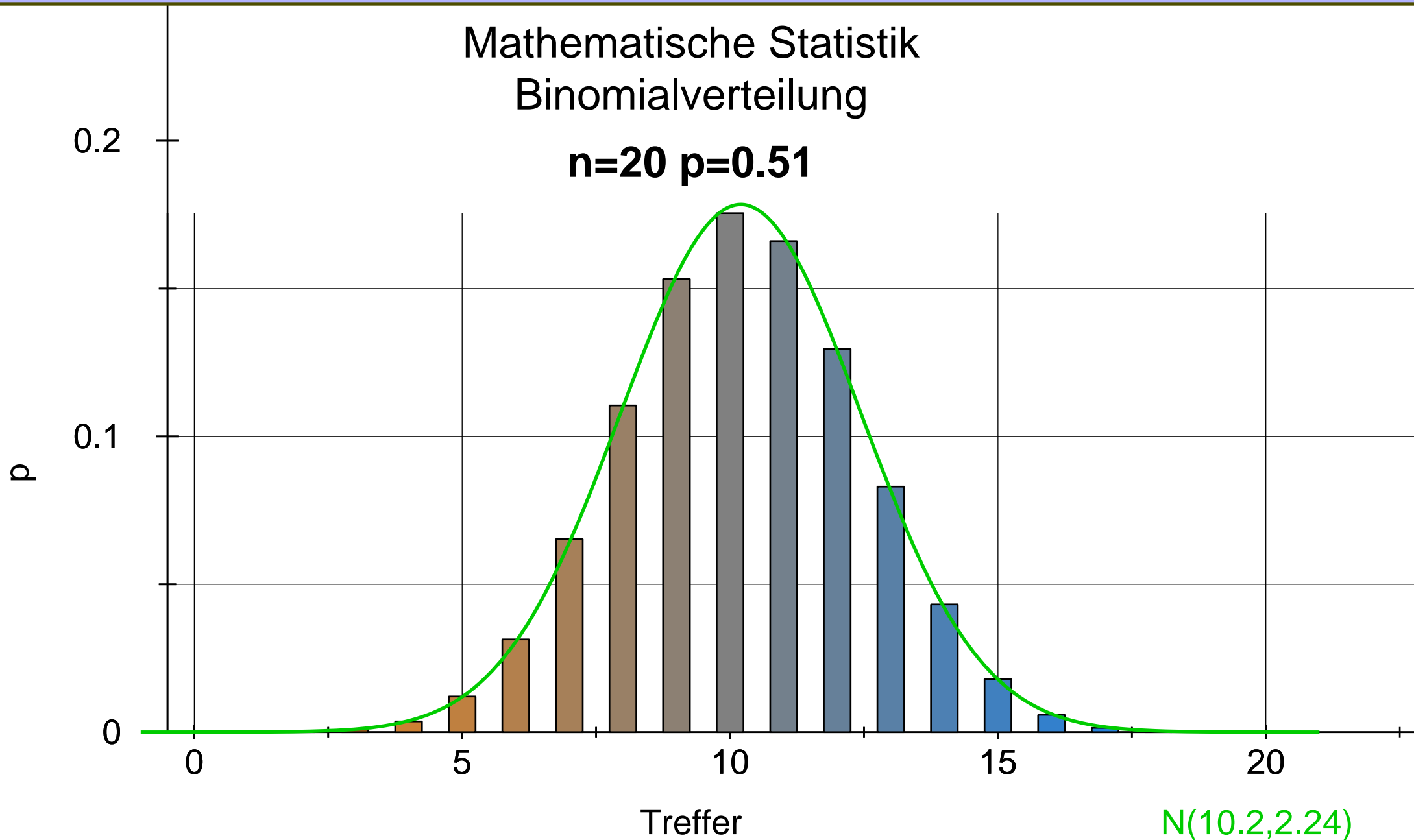


$N(10.0, 2.24)$

# Mathematische Statistik

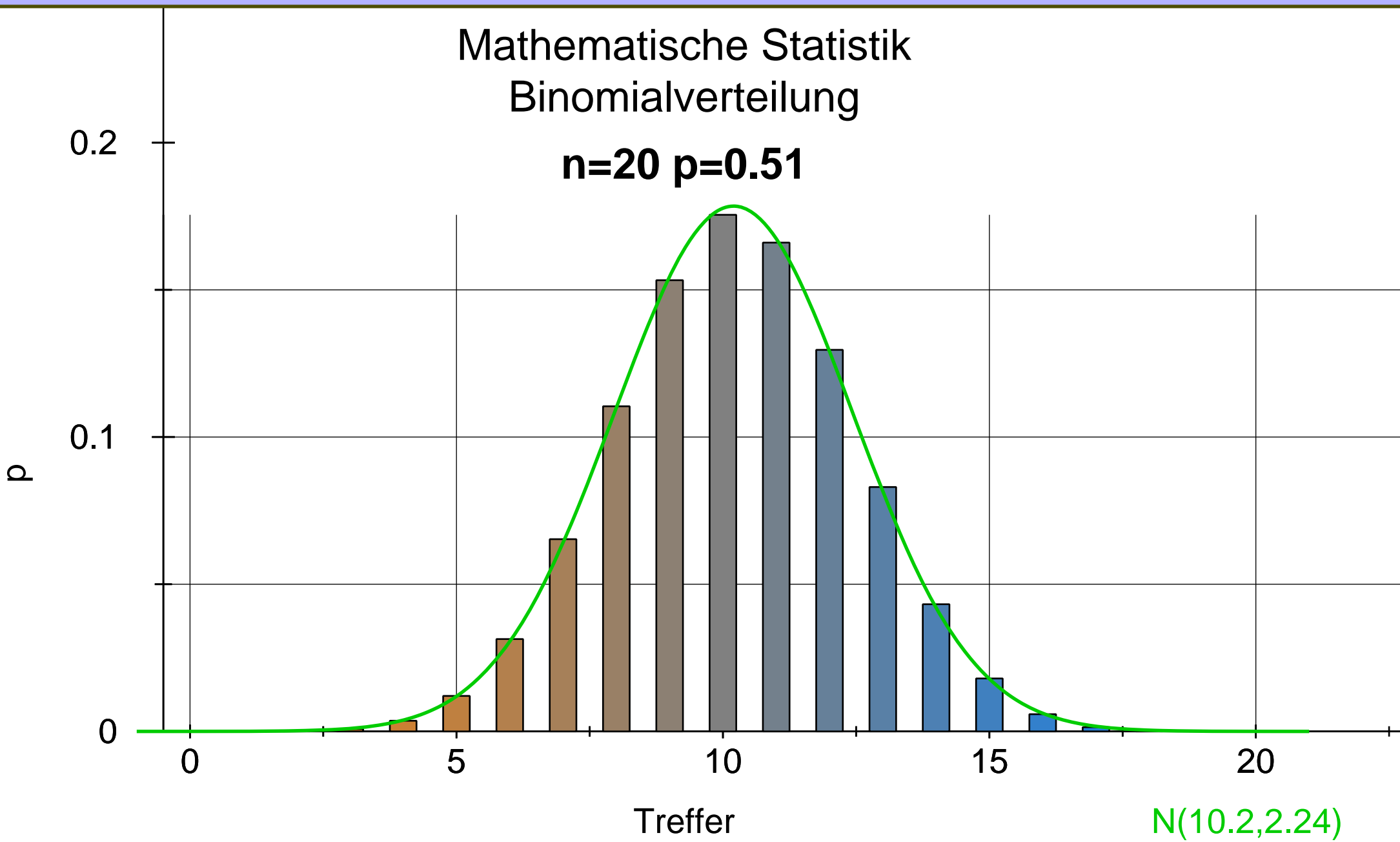
## Binomialverteilung

**n=20 p=0.51**



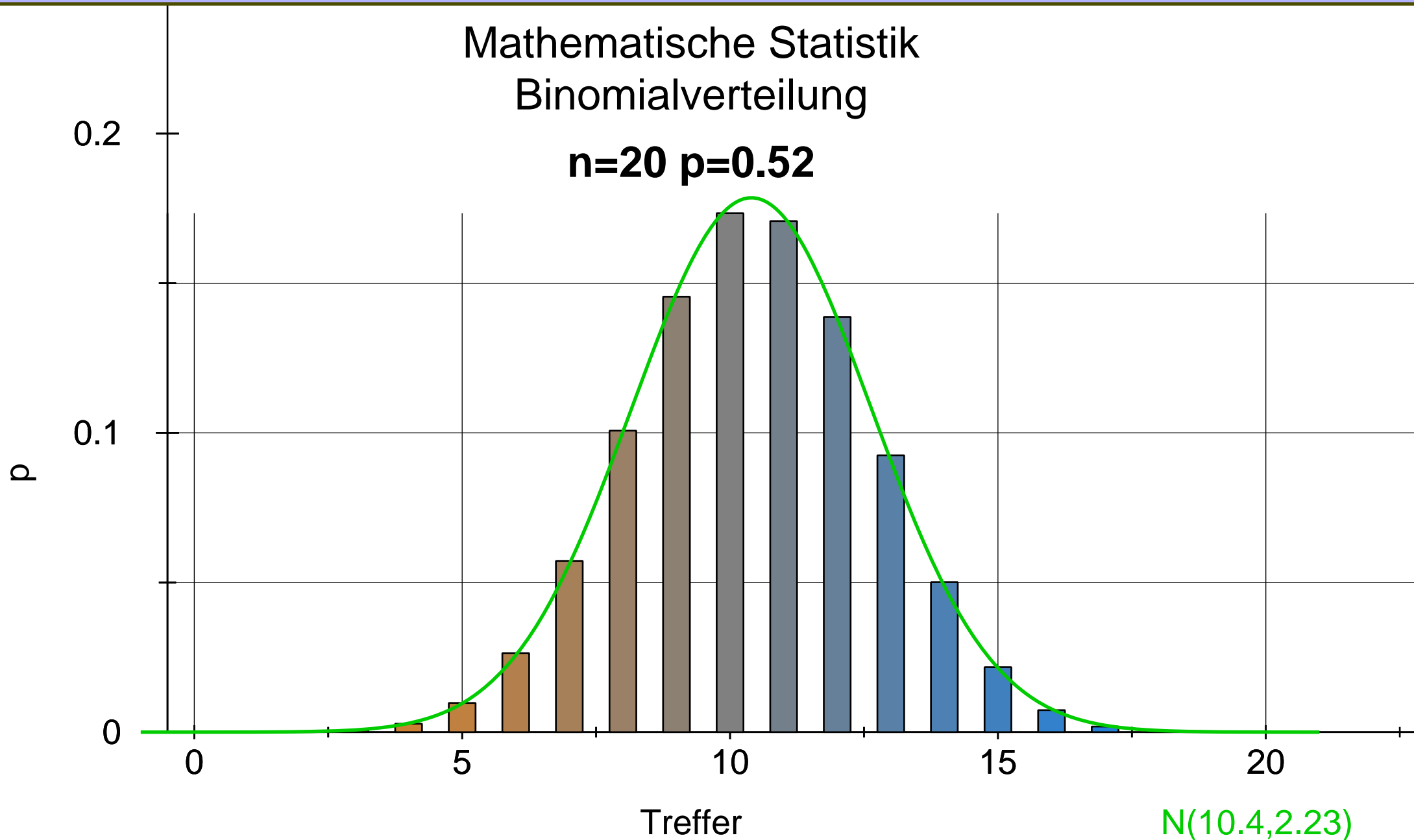
Mathematische Statistik  
Binomialverteilung

**n=20 p=0.51**



# Mathematische Statistik Binomialverteilung

**n=20 p=0.52**



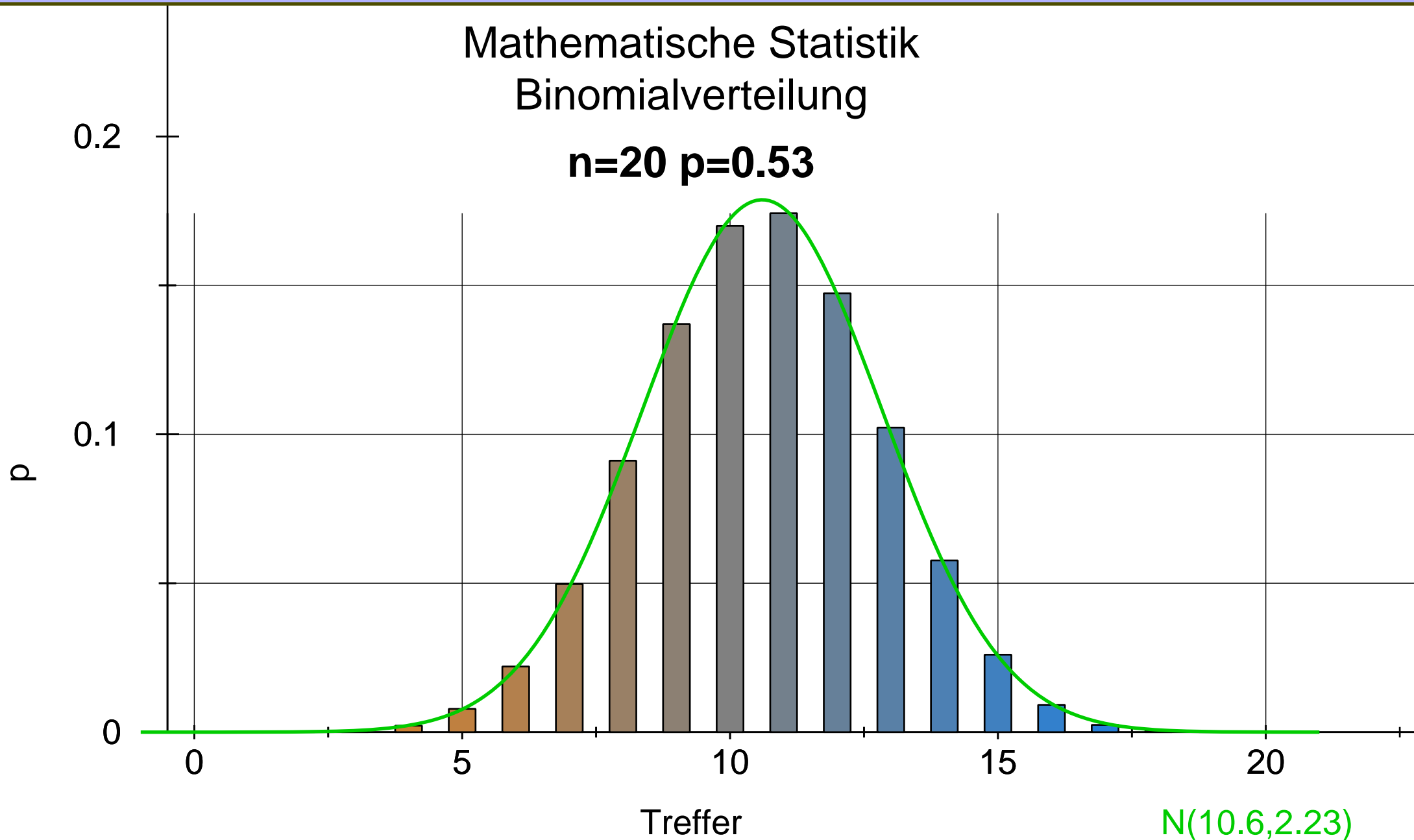
$N(10.4, 2.23)$



# Mathematische Statistik

## Binomialverteilung

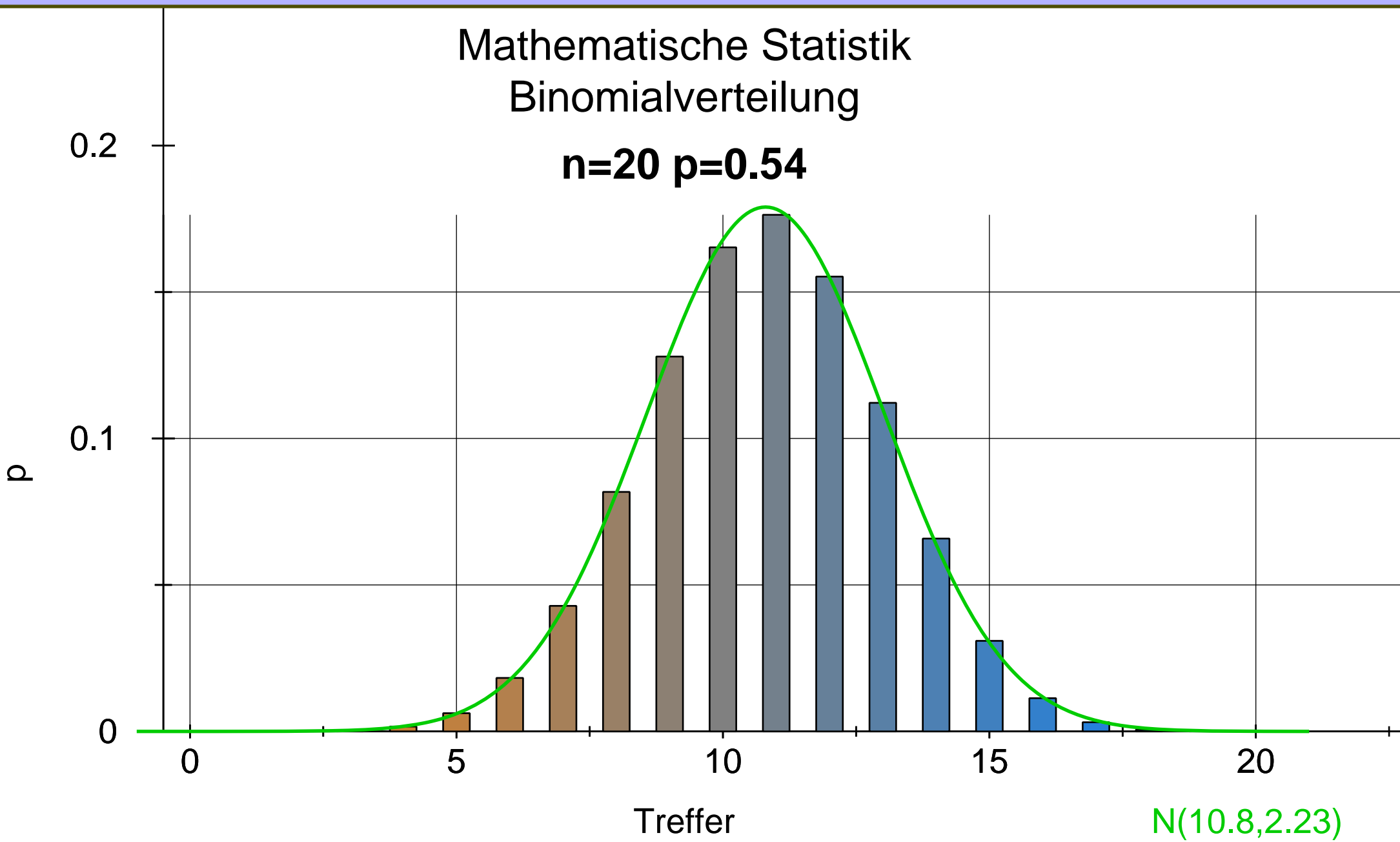
**n=20 p=0.53**



# Mathematische Statistik

## Binomialverteilung

**n=20 p=0.54**

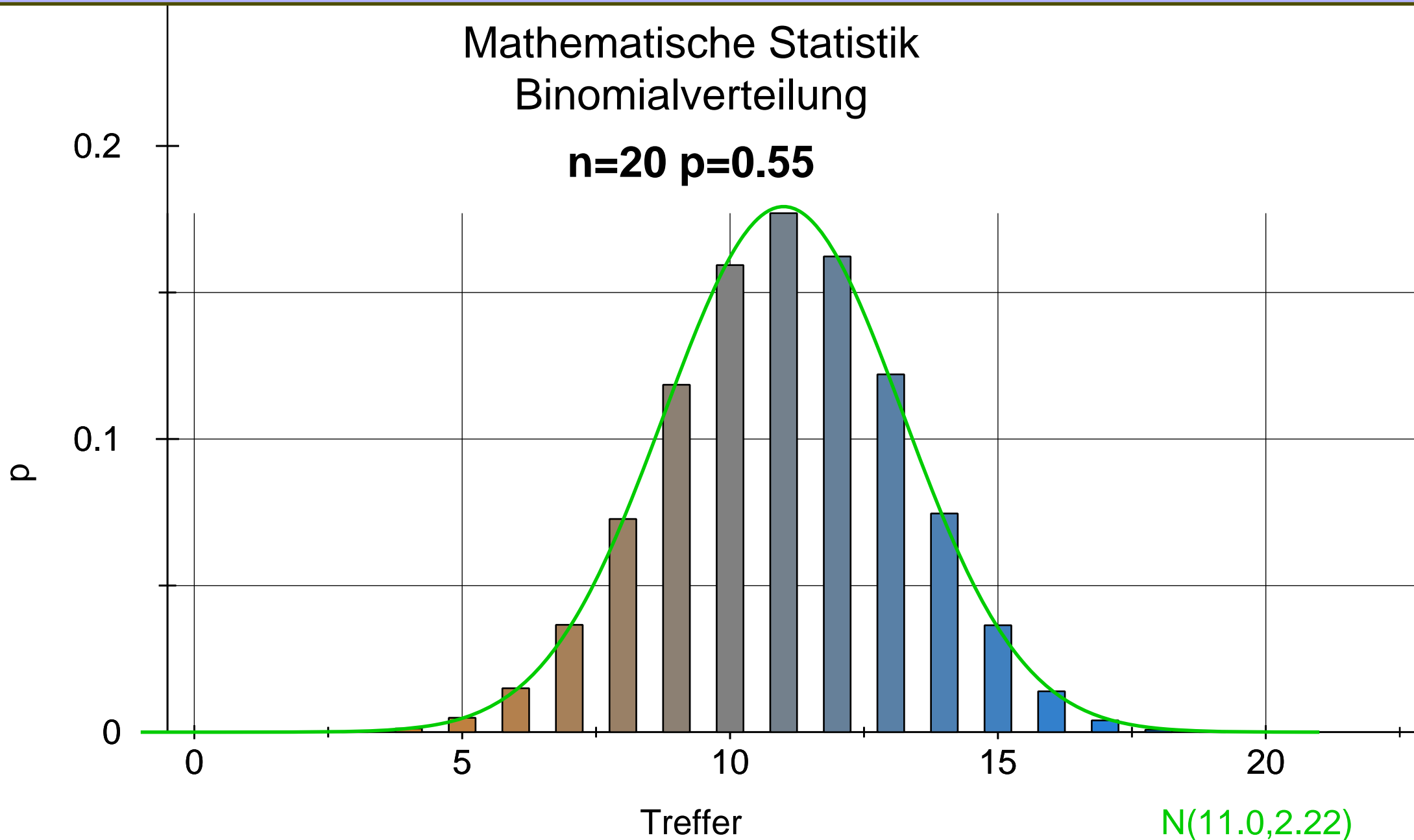


$N(10.8, 2.23)$

# Mathematische Statistik

## Binomialverteilung

**$n=20$   $p=0.55$**

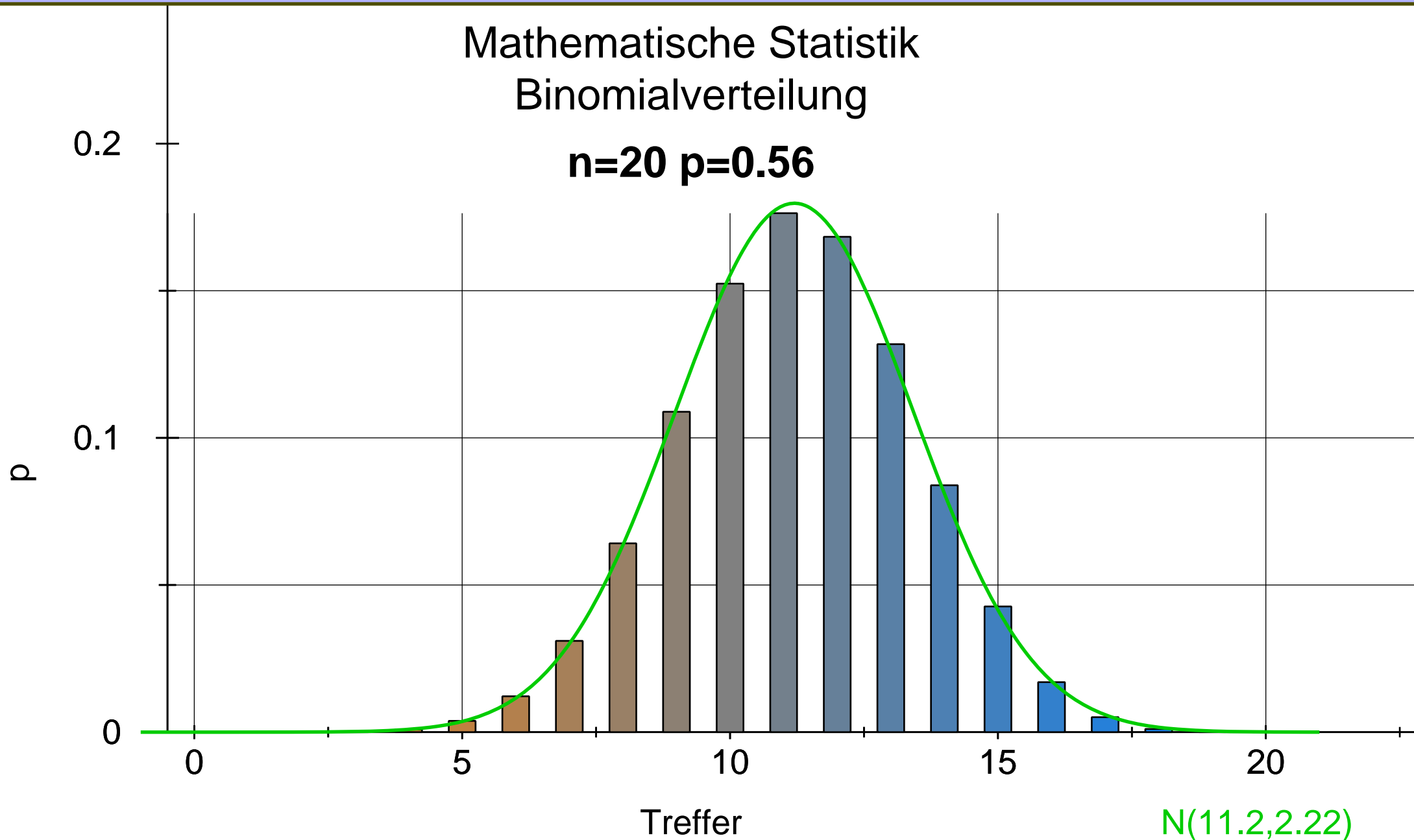


$N(11.0, 2.22)$

# Mathematische Statistik

## Binomialverteilung

**$n=20$   $p=0.56$**

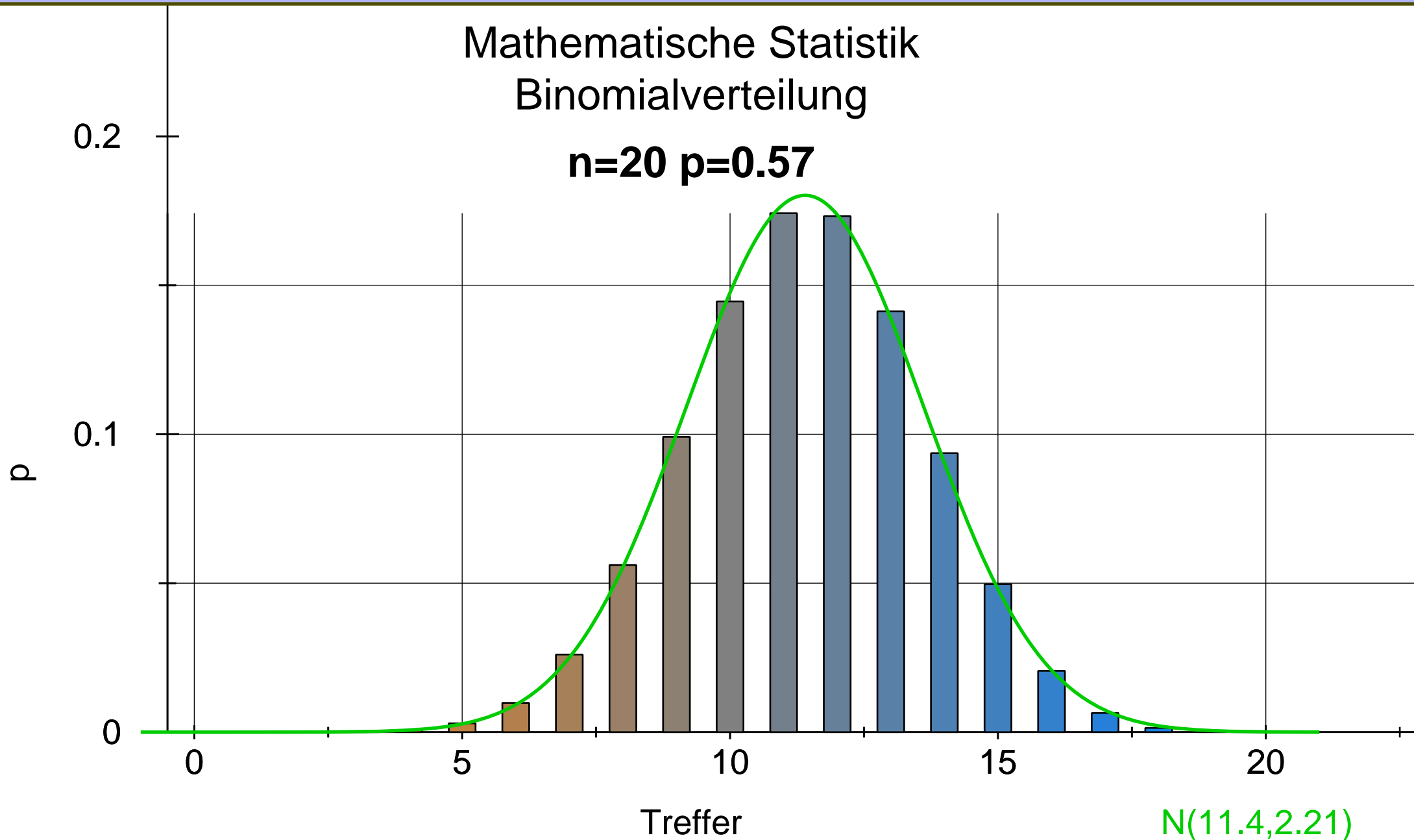


$N(11.2, 2.22)$

# Mathematische Statistik

## Binomialverteilung

**$n=20$   $p=0.57$**

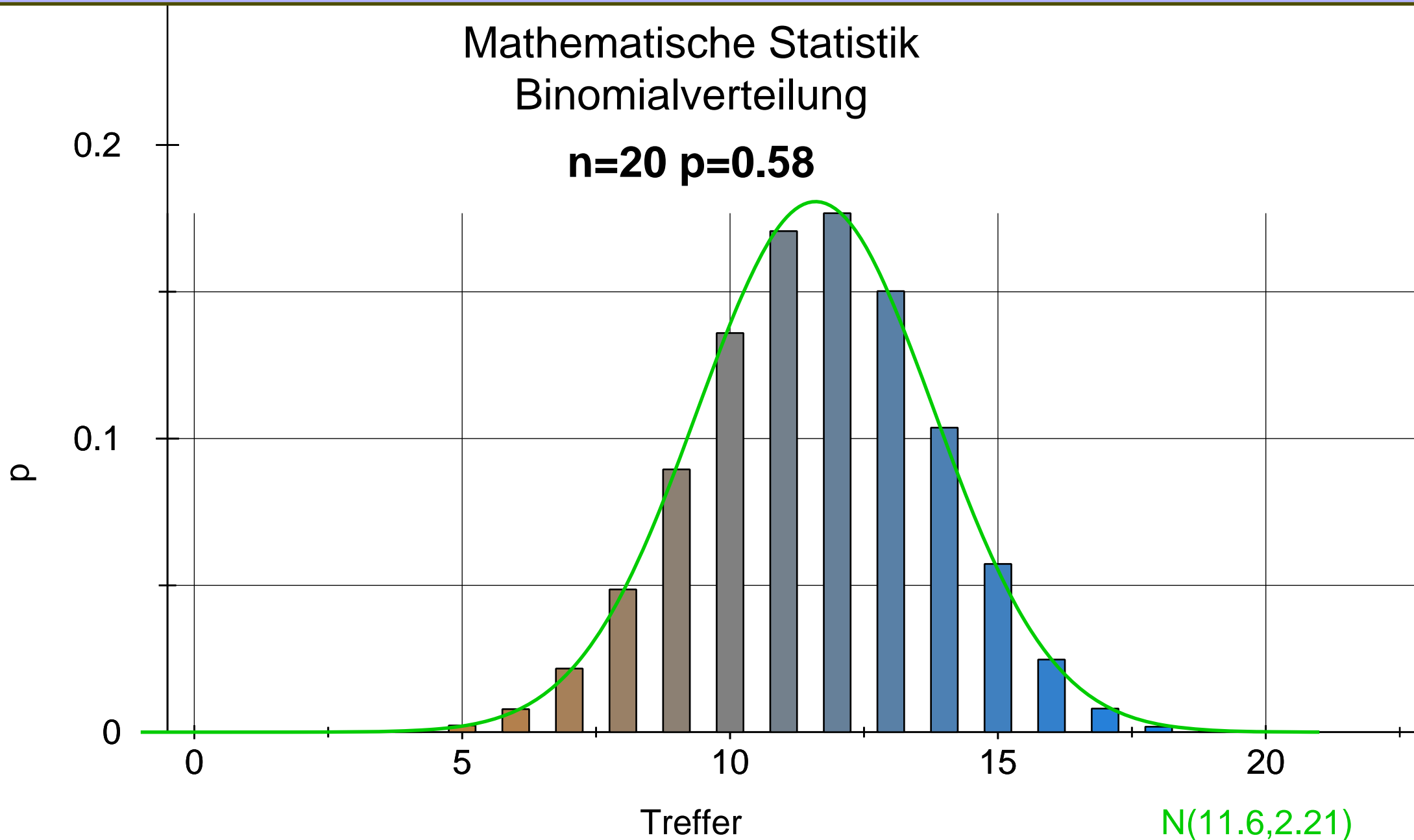


$N(11.4, 2.21)$

# Mathematische Statistik

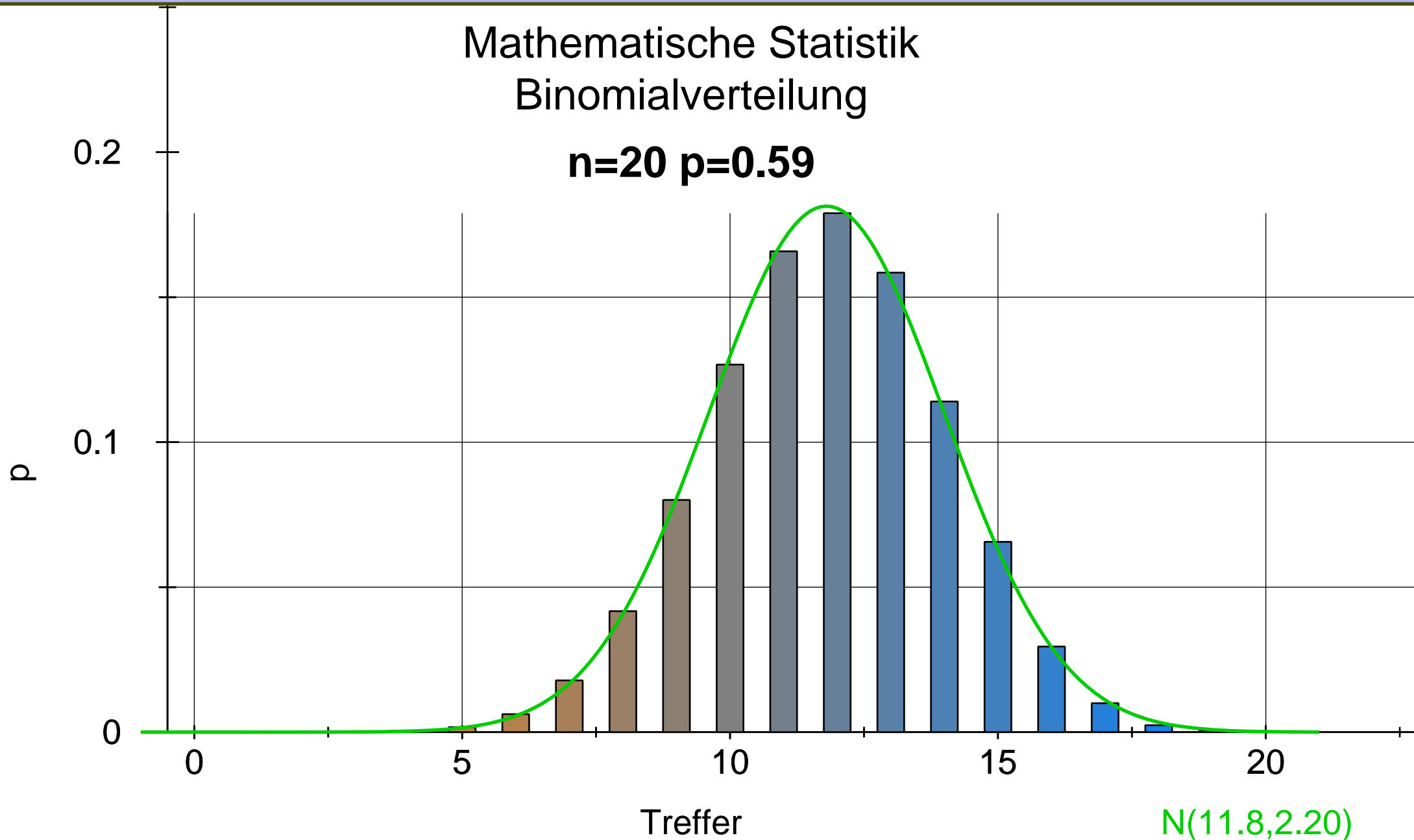
## Binomialverteilung

**$n=20$   $p=0.58$**



# Mathematische Statistik Binomialverteilung

**n=20 p=0.59**

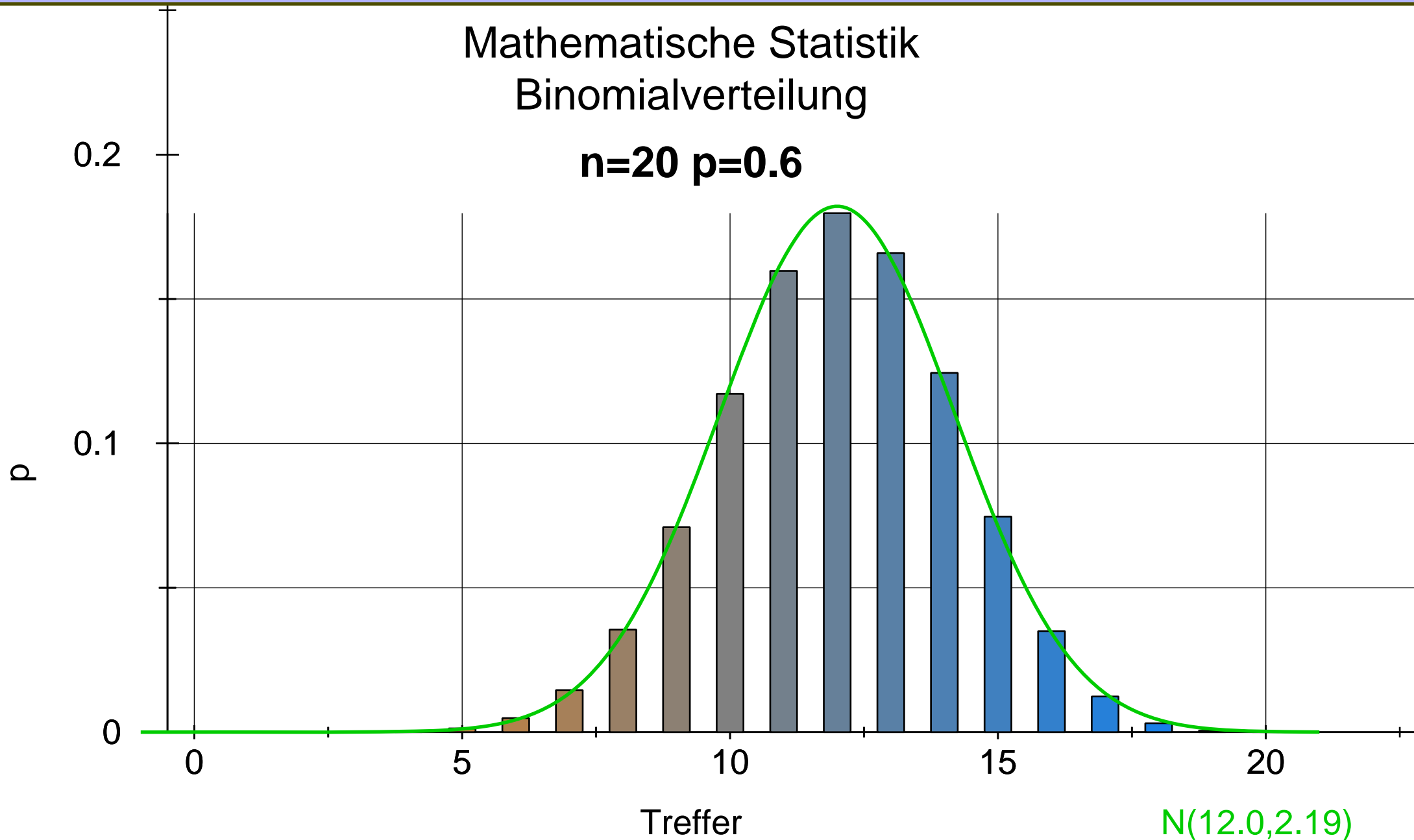


$N(11.8, 2.20)$

# Mathematische Statistik

## Binomialverteilung

**n=20 p=0.6**

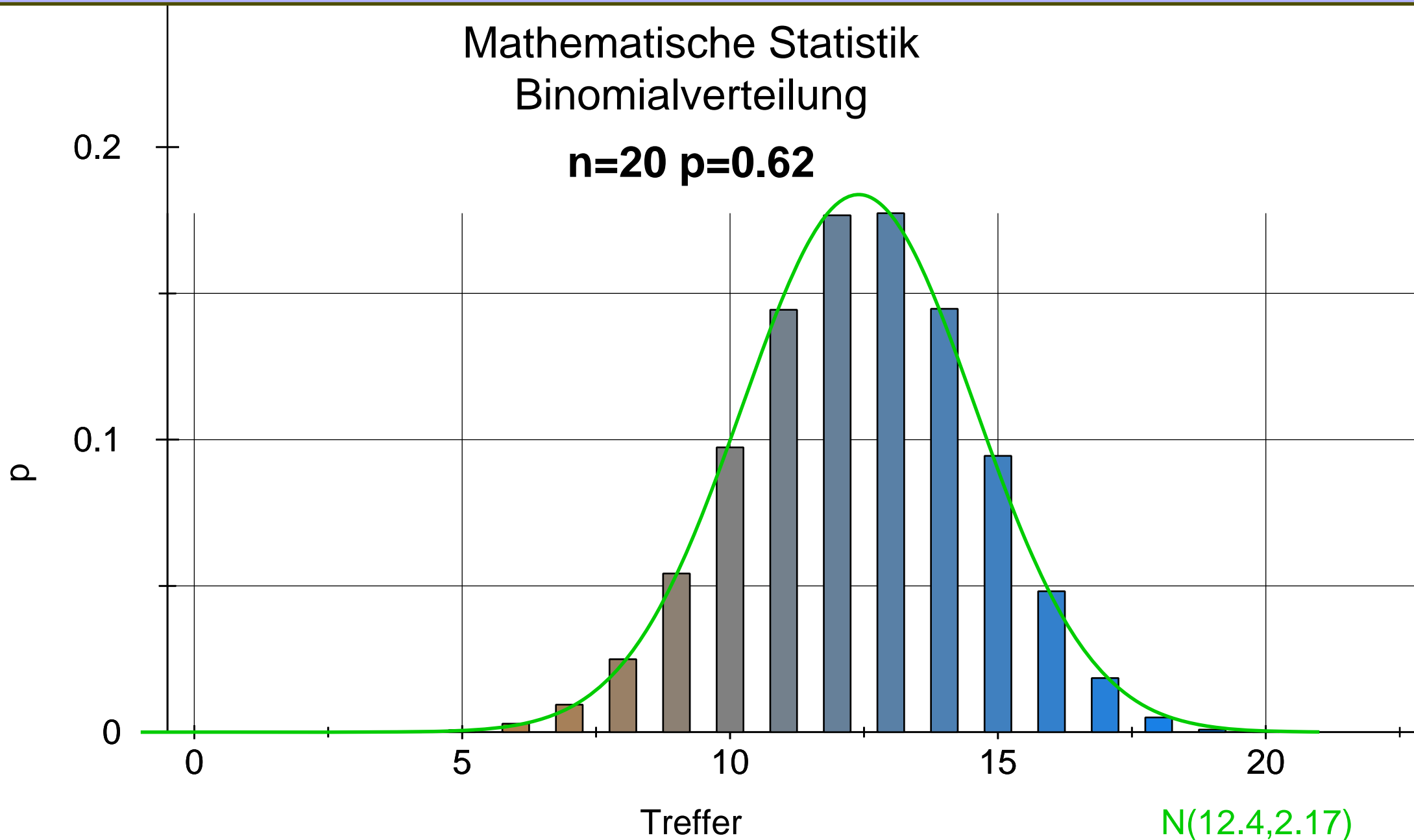


$N(12.0, 2.19)$



# Mathematische Statistik Binomialverteilung

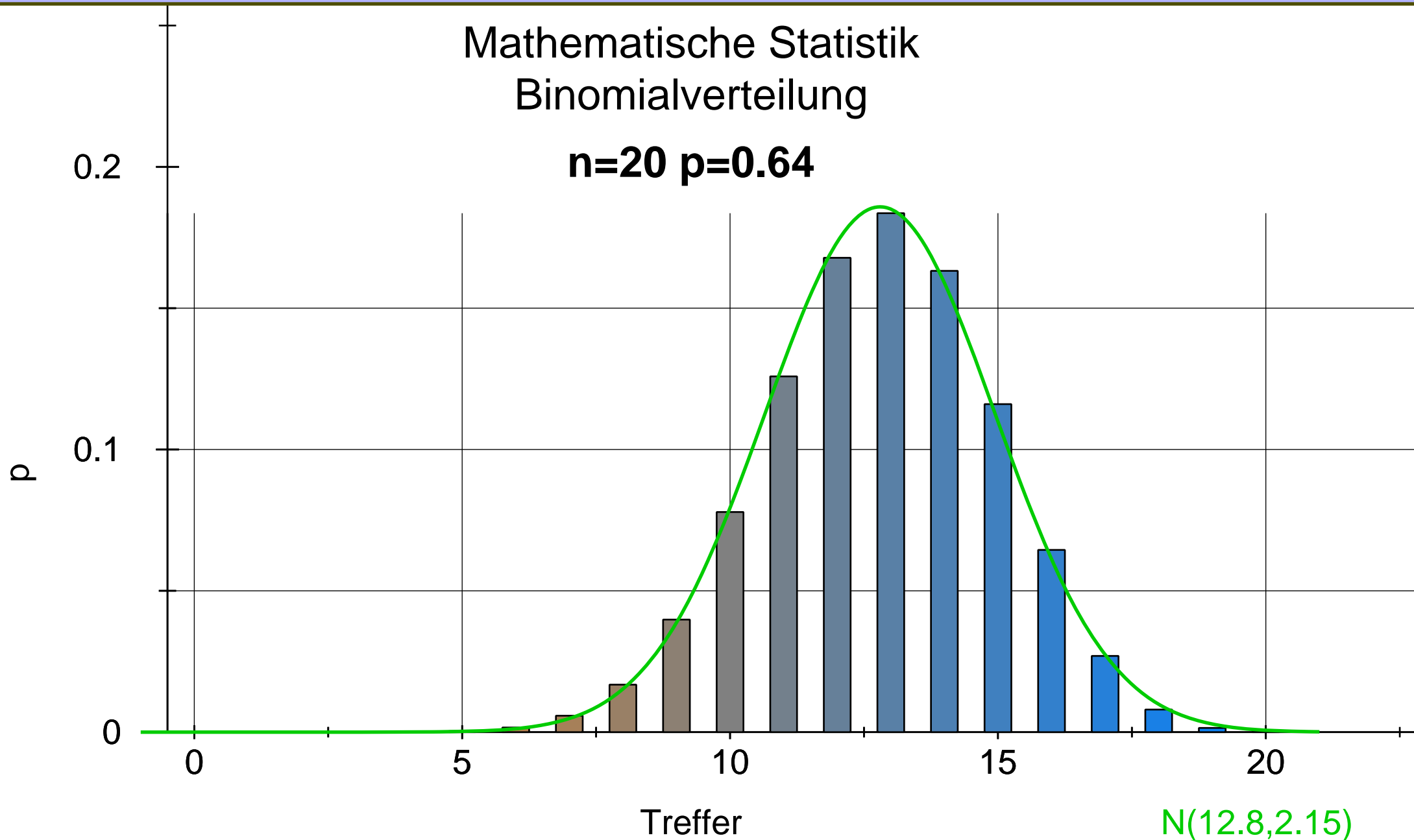
**$n=20$   $p=0.62$**



$N(12.4, 2.17)$

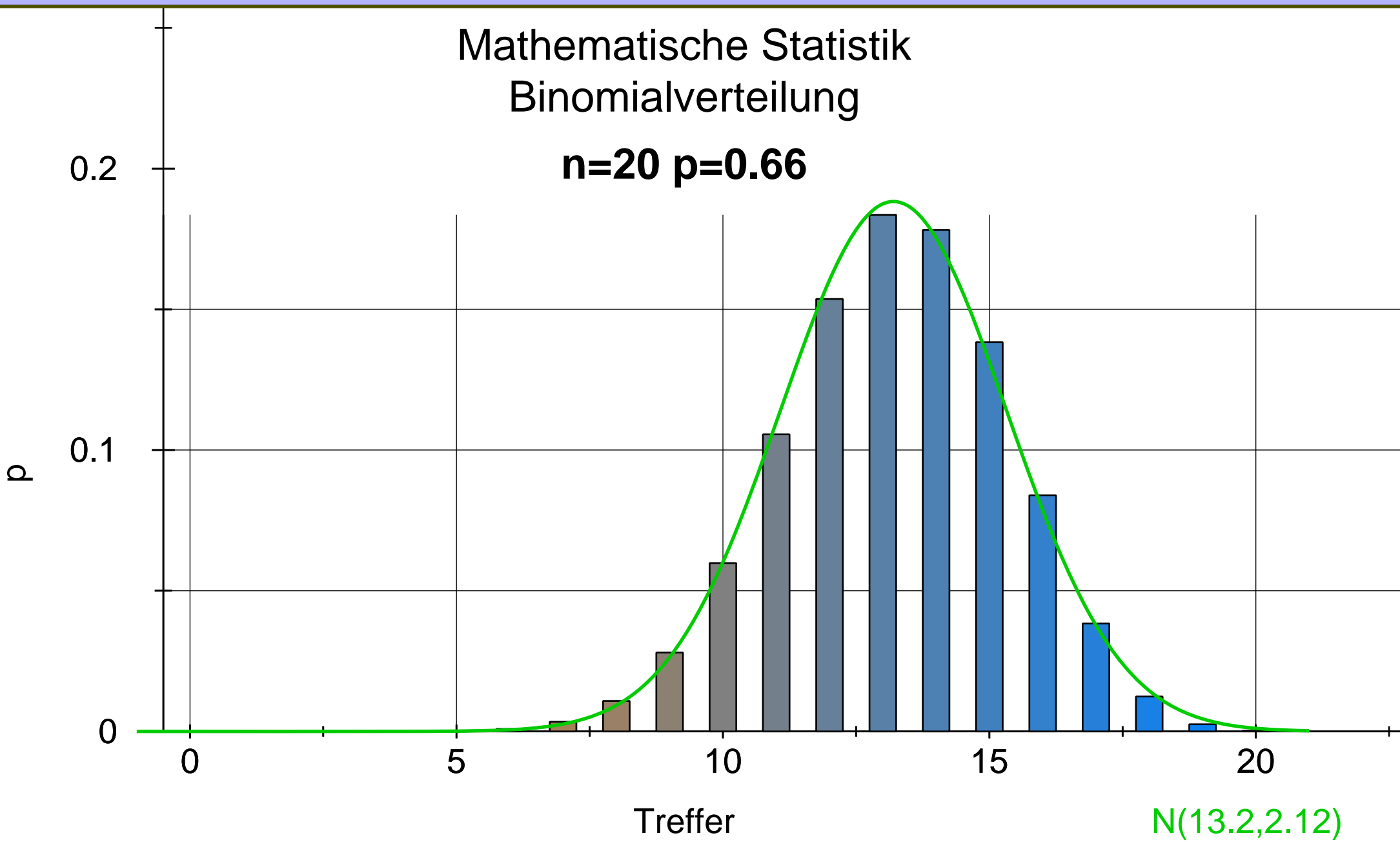
# Mathematische Statistik Binomialverteilung

**$n=20$   $p=0.64$**



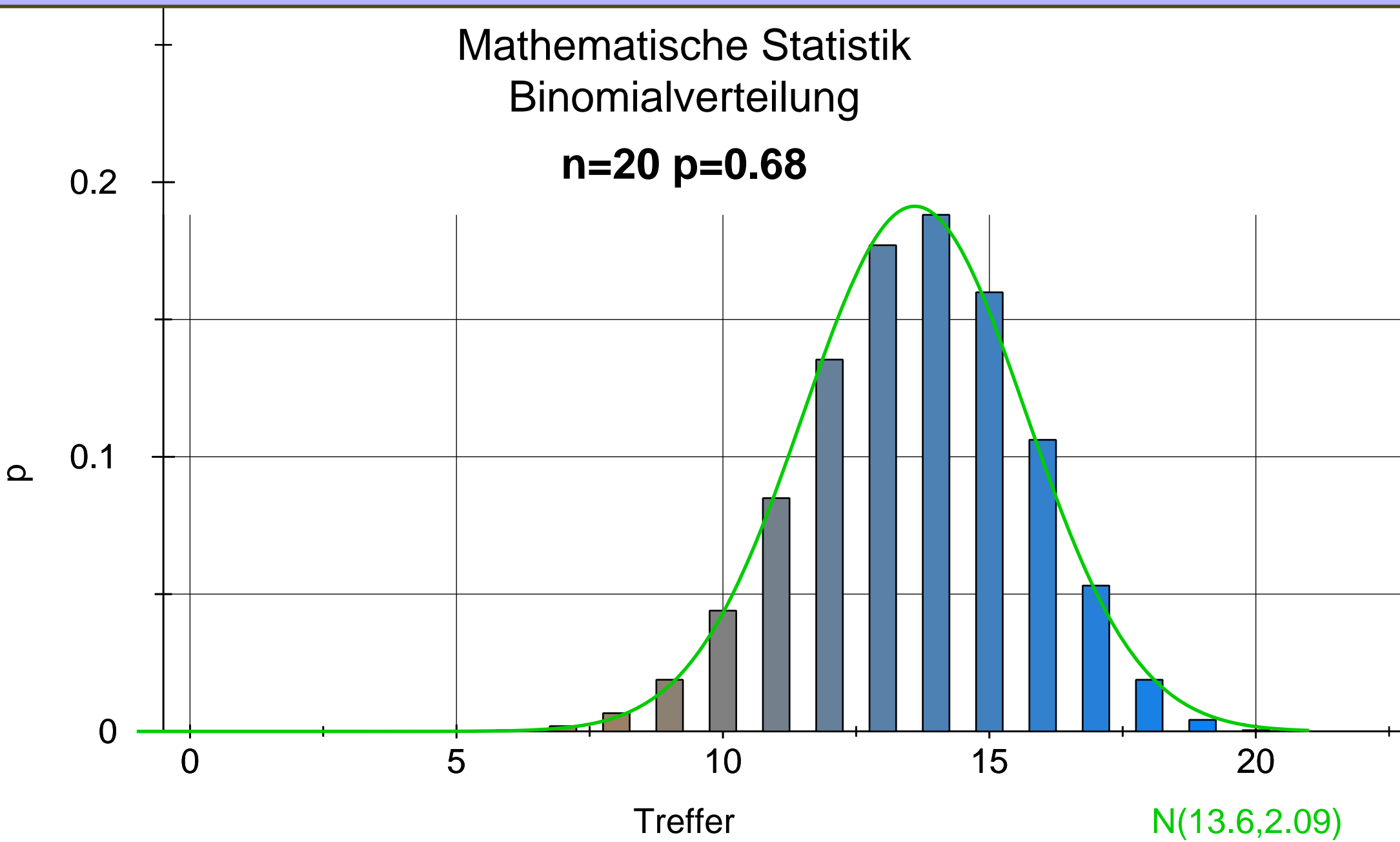
Mathematische Statistik  
Binomialverteilung

**n=20 p=0.66**



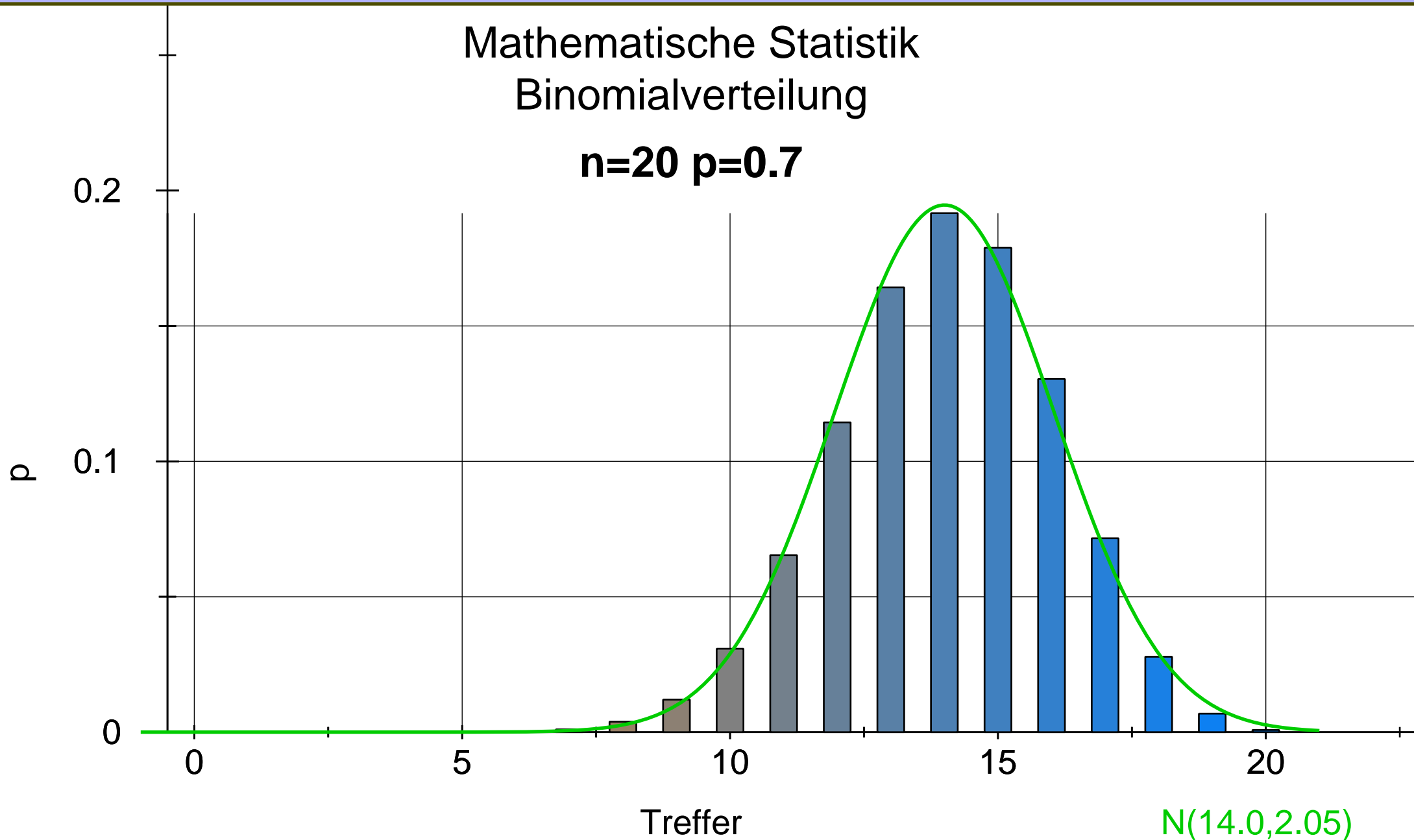
Mathematische Statistik  
Binomialverteilung

**n=20 p=0.68**



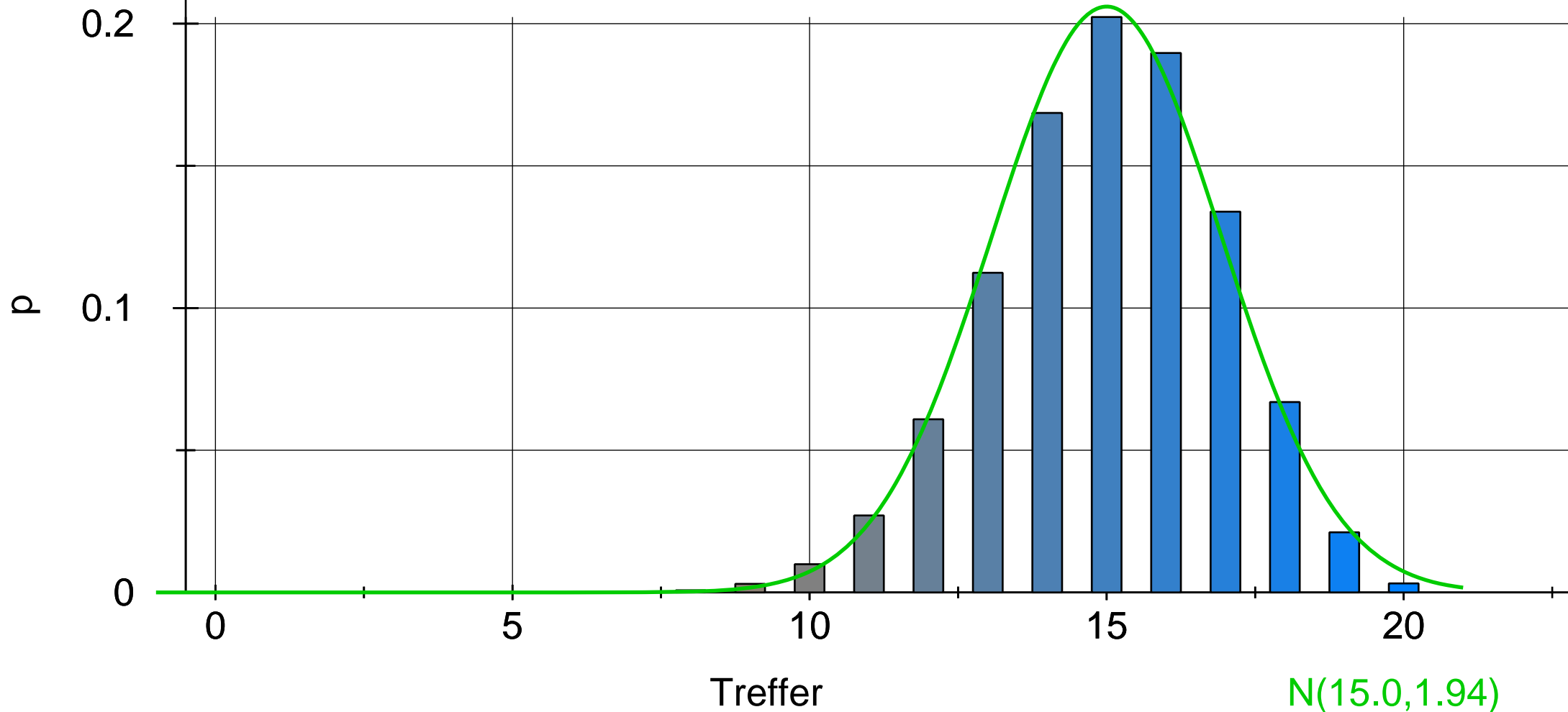
Mathematische Statistik  
Binomialverteilung

**n=20 p=0.7**



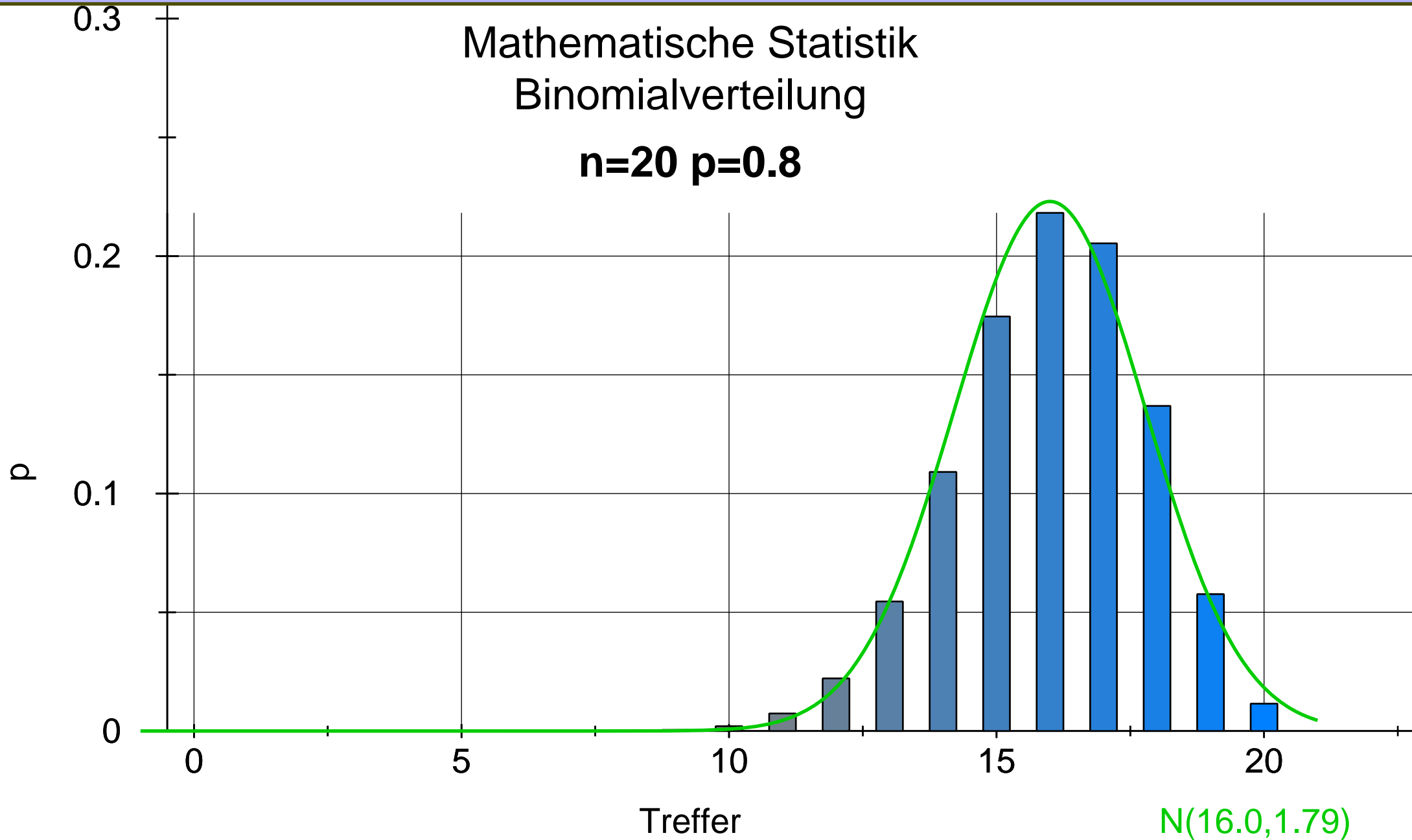
Mathematische Statistik  
Binomialverteilung

**n=20 p=0.75**



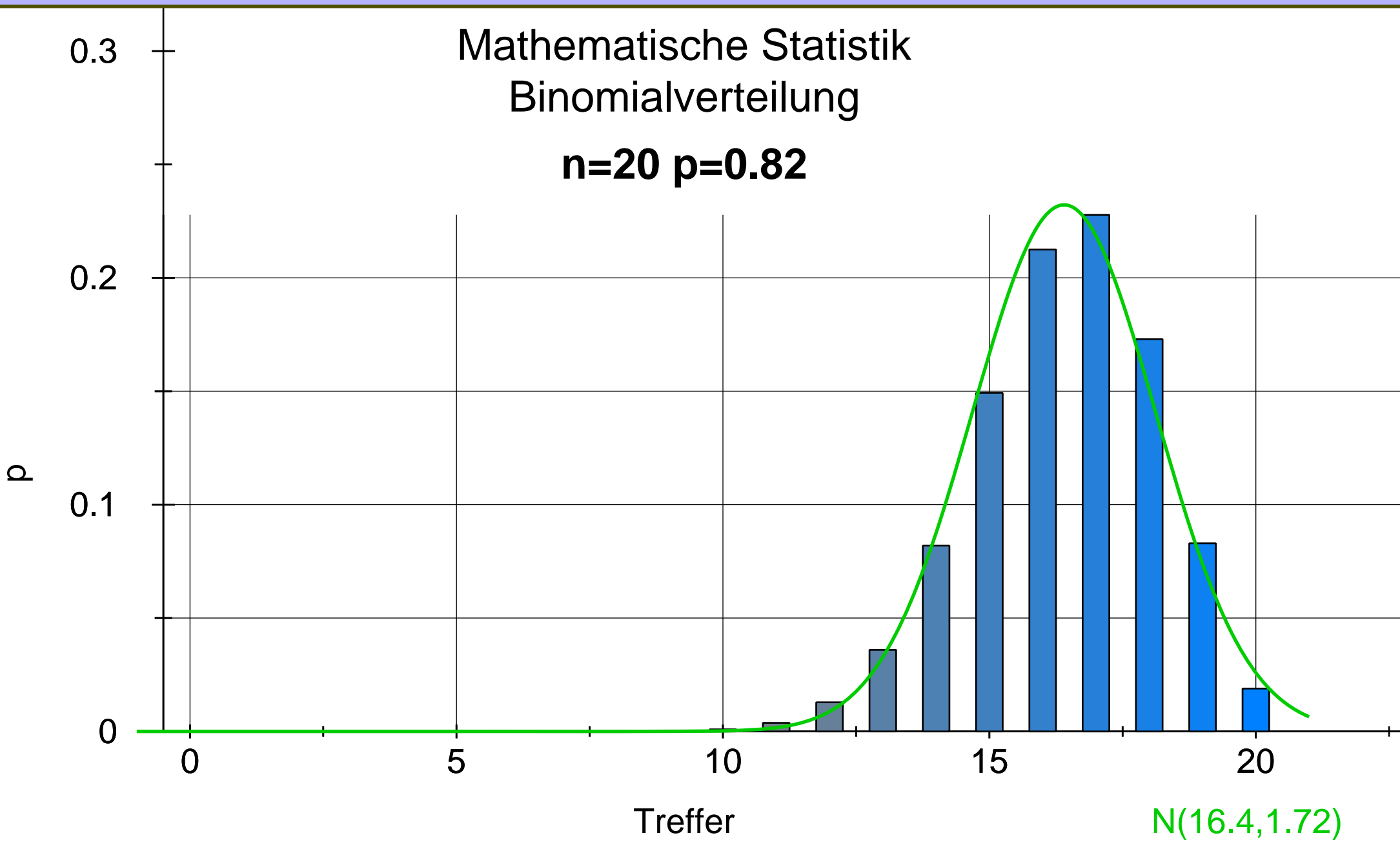
Mathematische Statistik  
Binomialverteilung

**n=20 p=0.8**



Mathematische Statistik  
Binomialverteilung

**n=20 p=0.82**

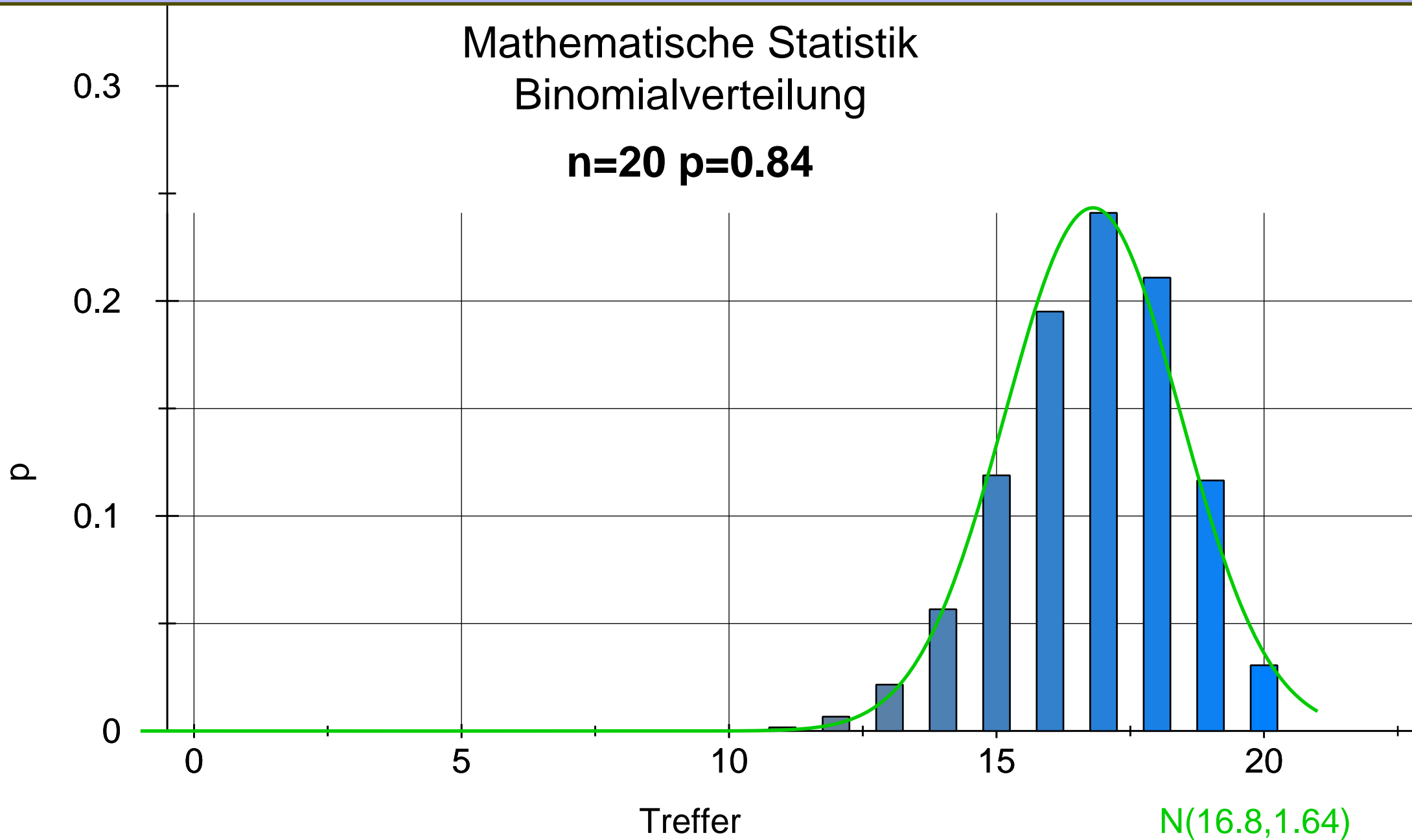


$N(16.4, 1.72)$



Mathematische Statistik  
Binomialverteilung

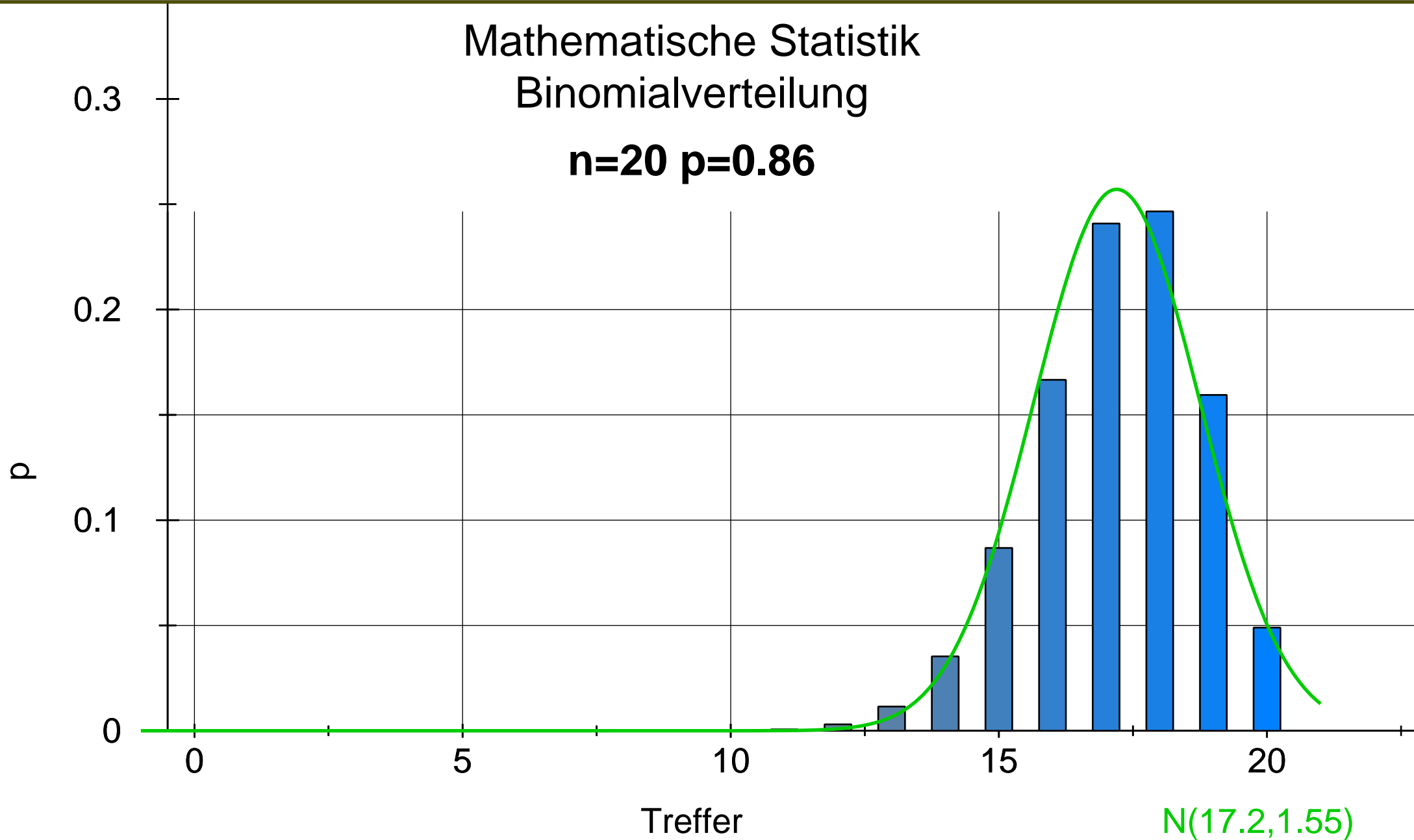
**n=20 p=0.84**



$N(16.8, 1.64)$

Mathematische Statistik  
Binomialverteilung

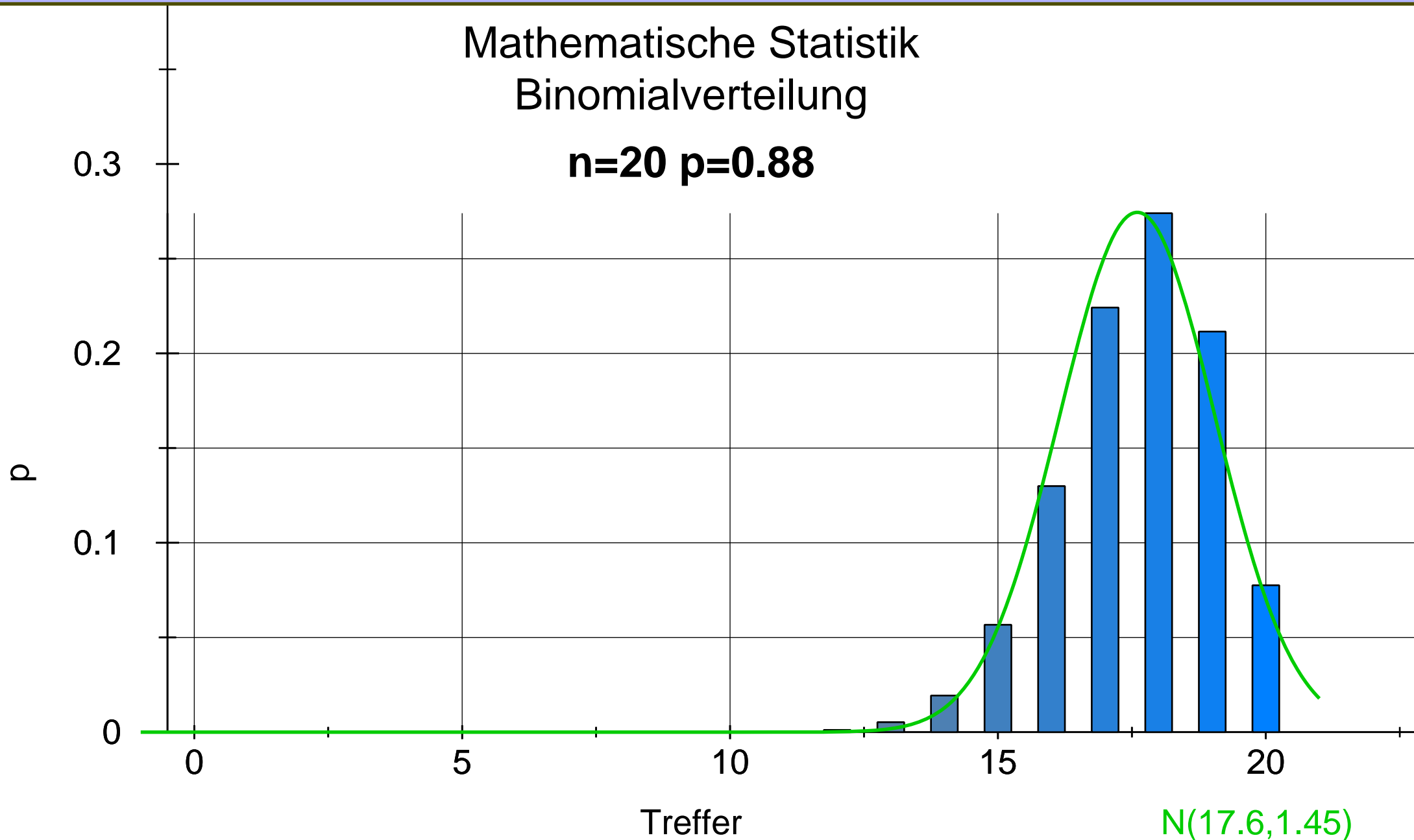
**n=20 p=0.86**



# Mathematische Statistik

## Binomialverteilung

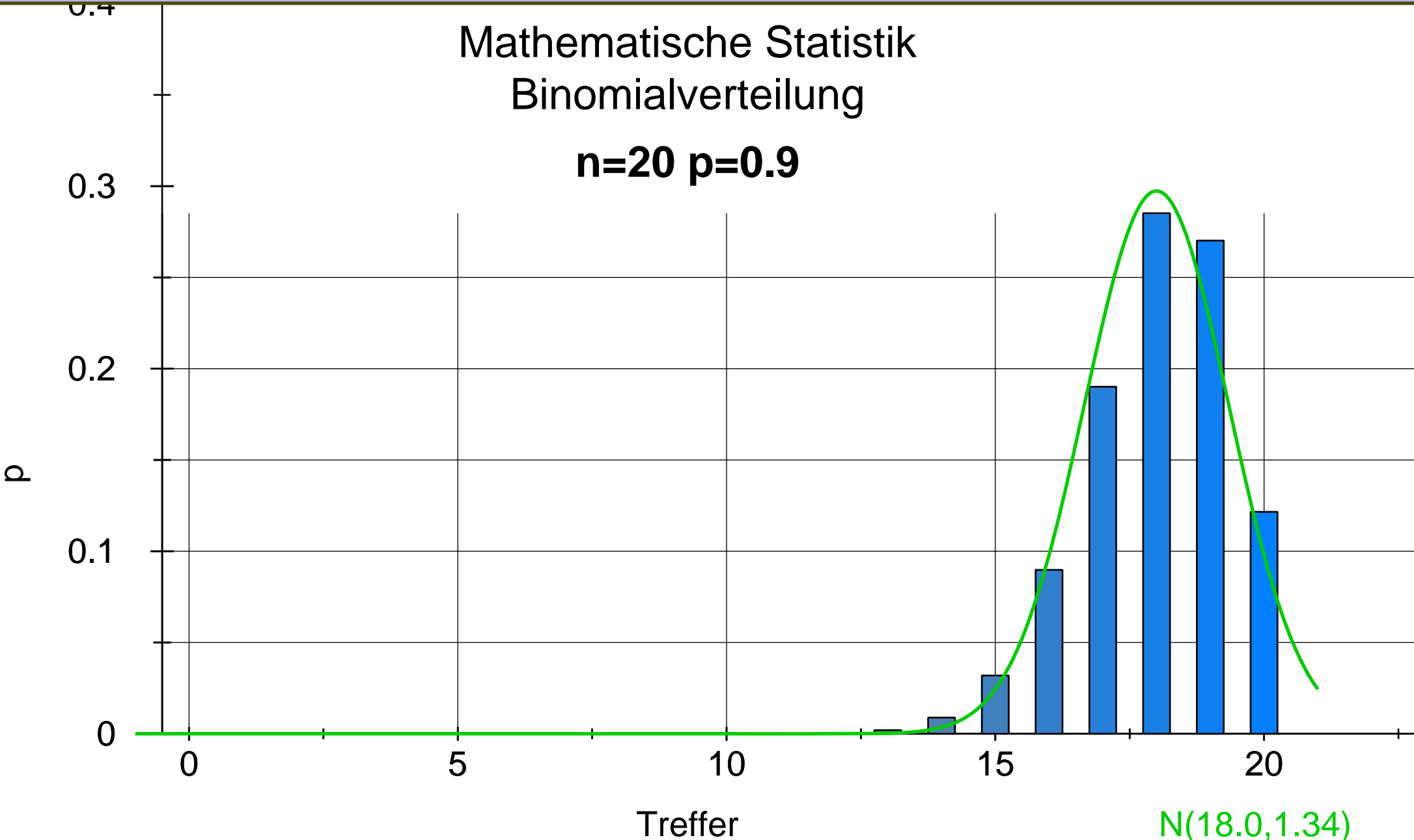
**$n=20$   $p=0.88$**



$N(17.6, 1.45)$

Mathematische Statistik  
Binomialverteilung

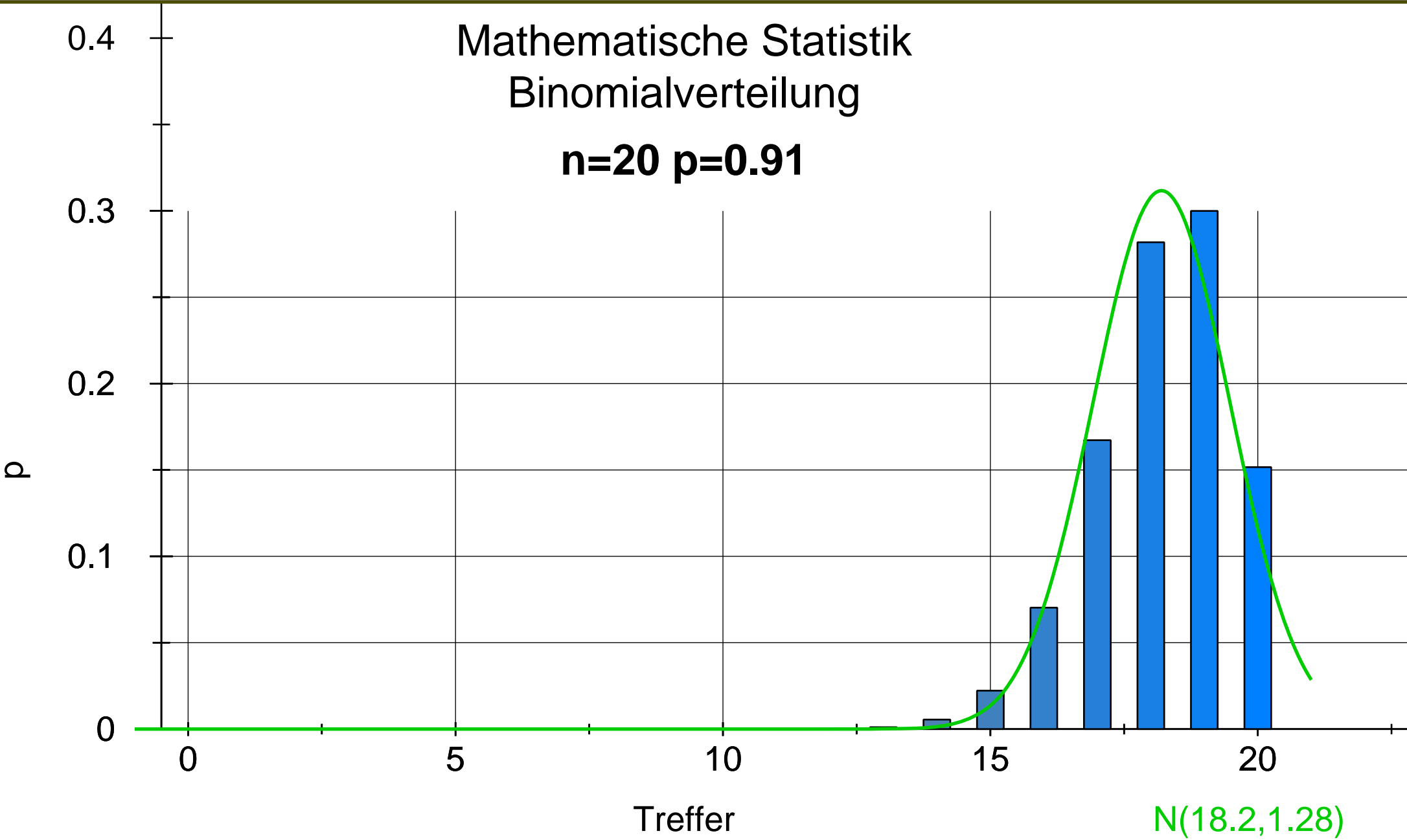
**n=20 p=0.9**



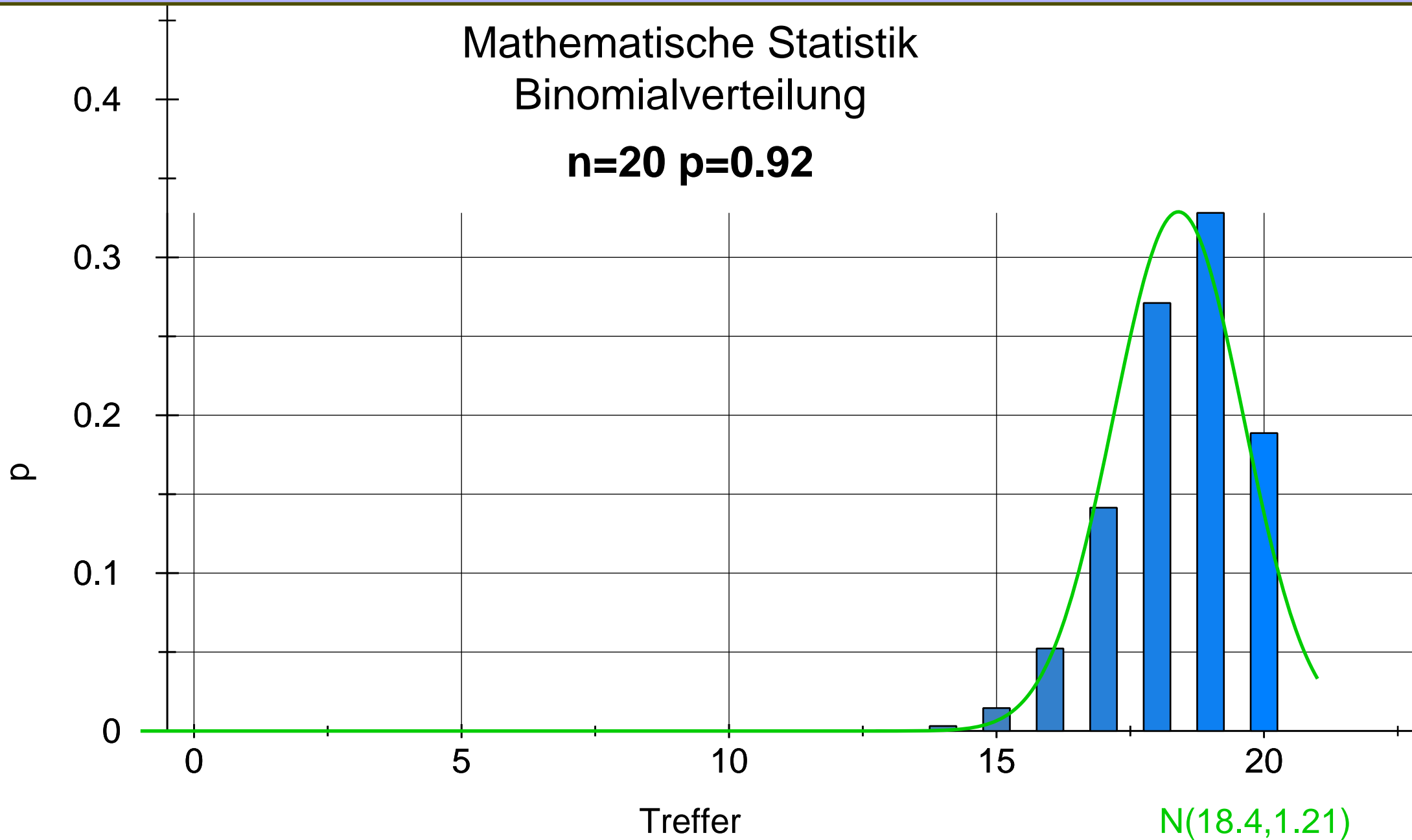
$N(18.0, 1.34)$

Mathematische Statistik  
Binomialverteilung

**n=20 p=0.91**



Mathematische Statistik  
Binomialverteilung  
**n=20 p=0.92**

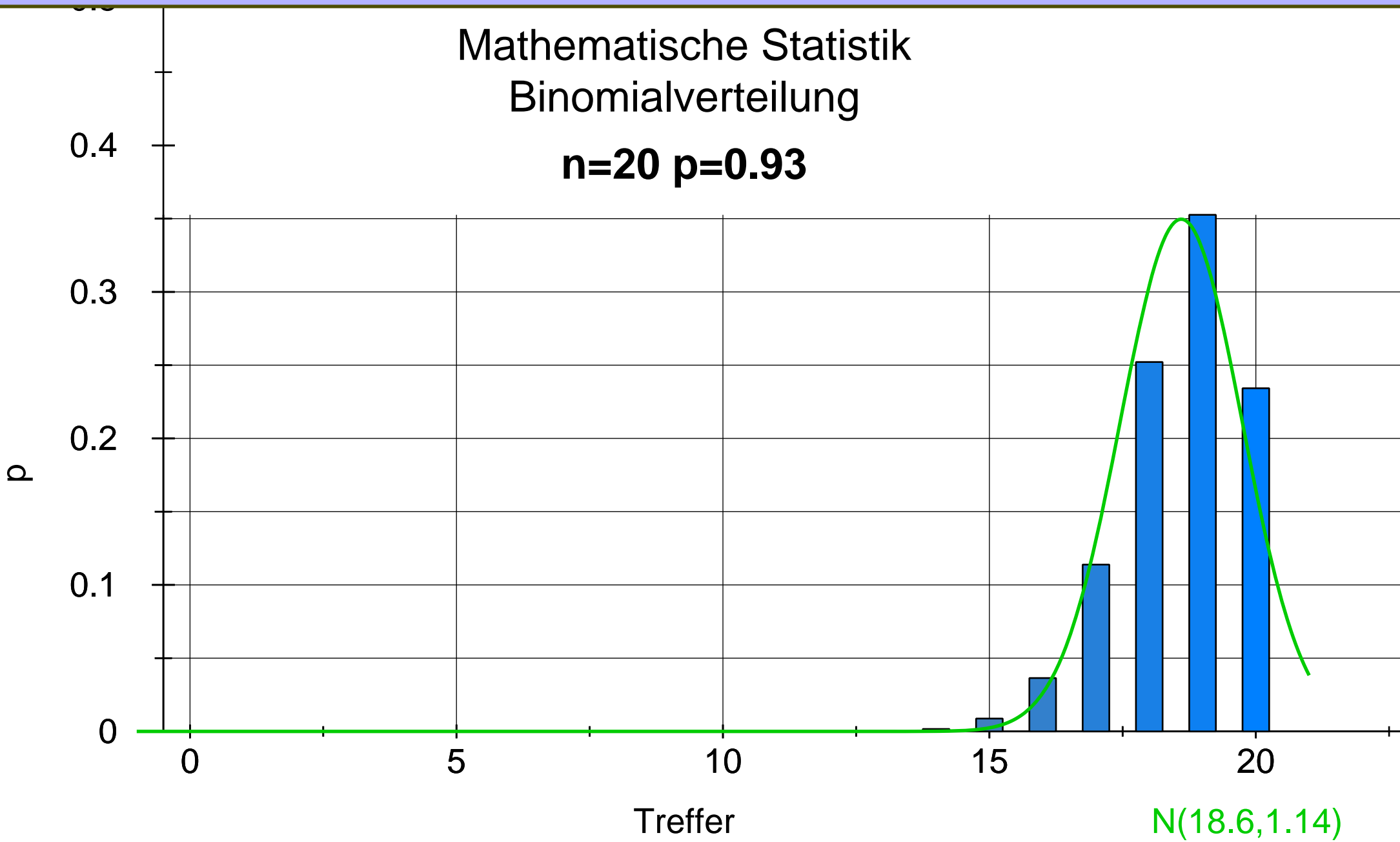


$N(18.4, 1.21)$

# Mathematische Statistik

## Binomialverteilung

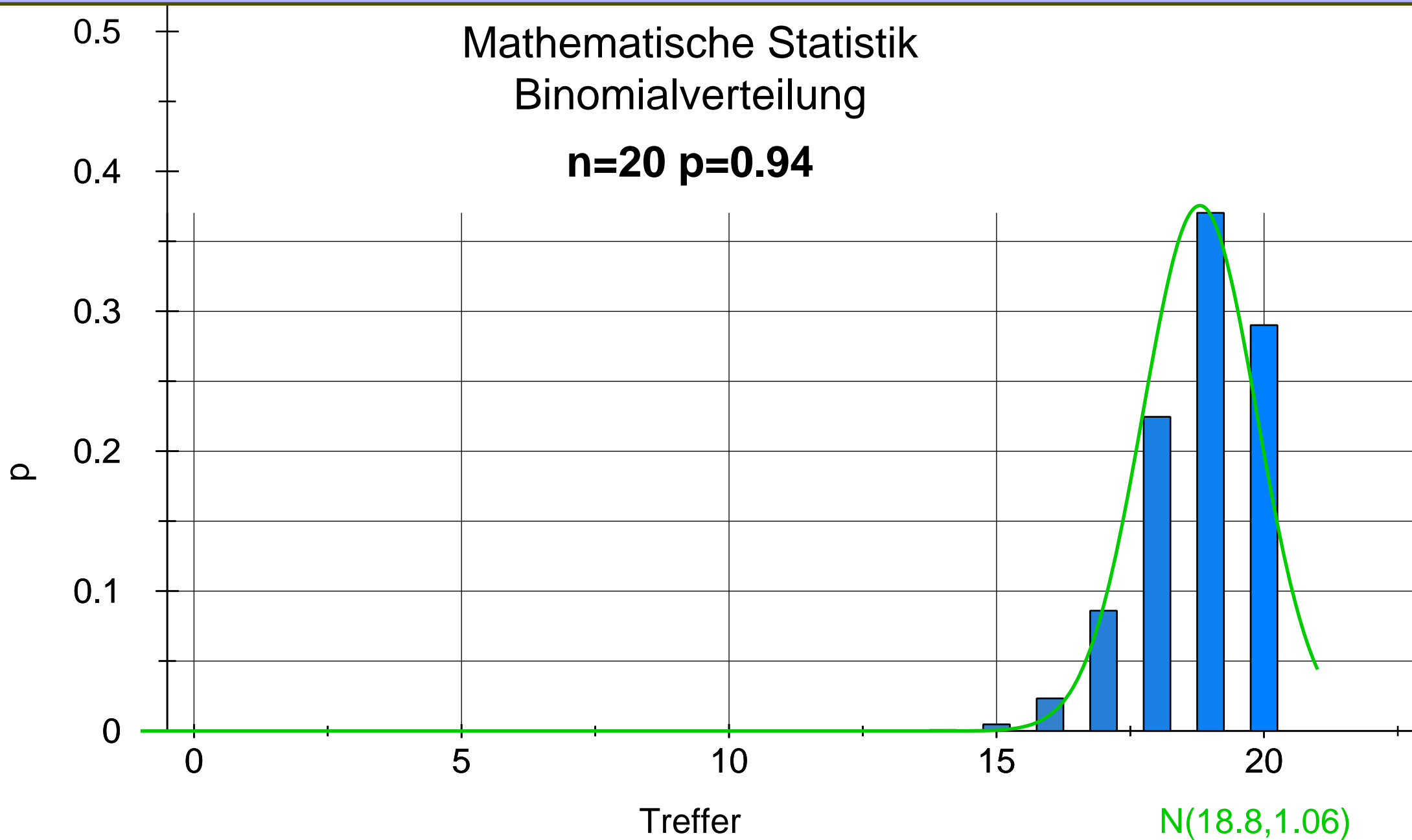
**n=20 p=0.93**



N(18.6, 1.14)

Mathematische Statistik  
Binomialverteilung

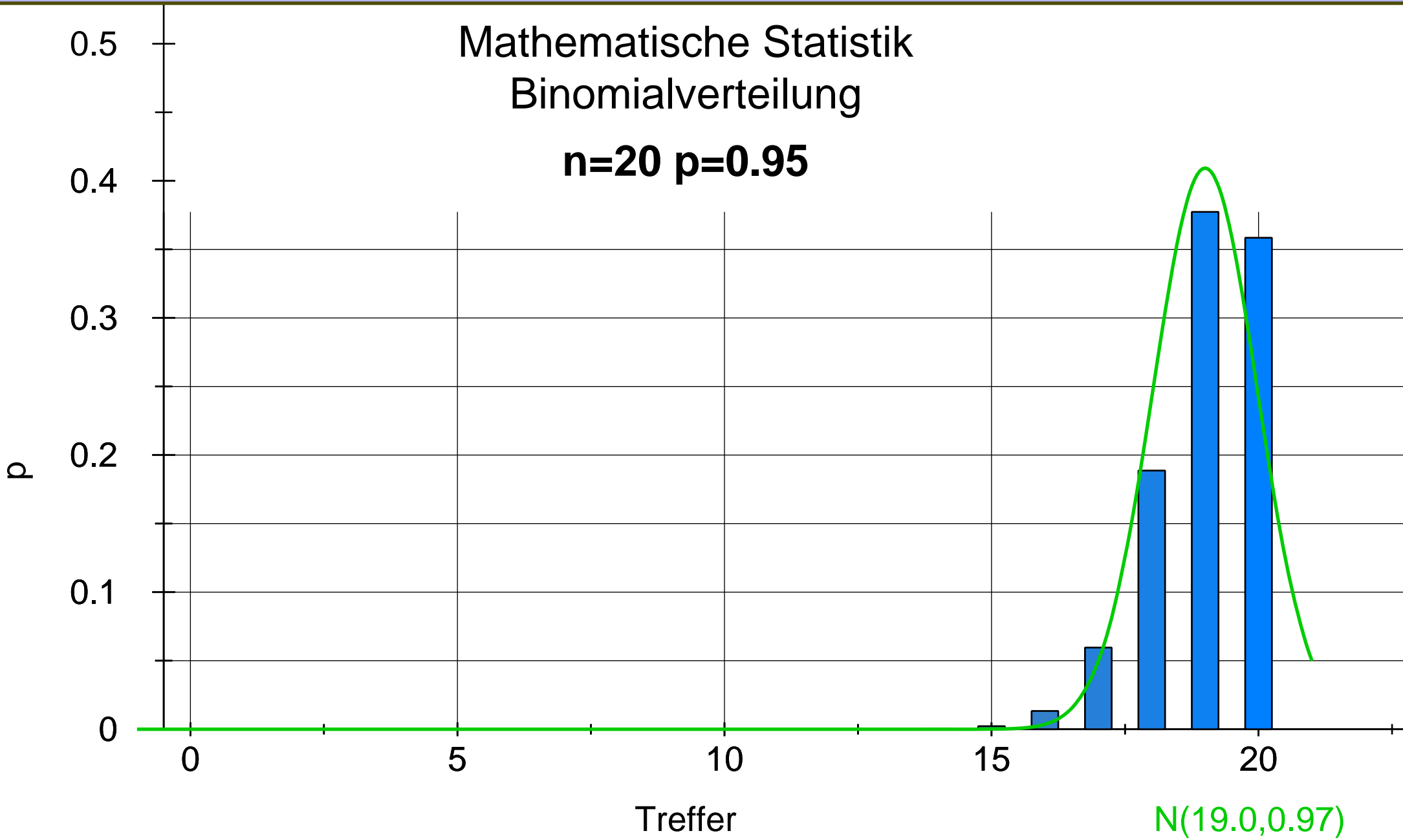
**n=20 p=0.94**



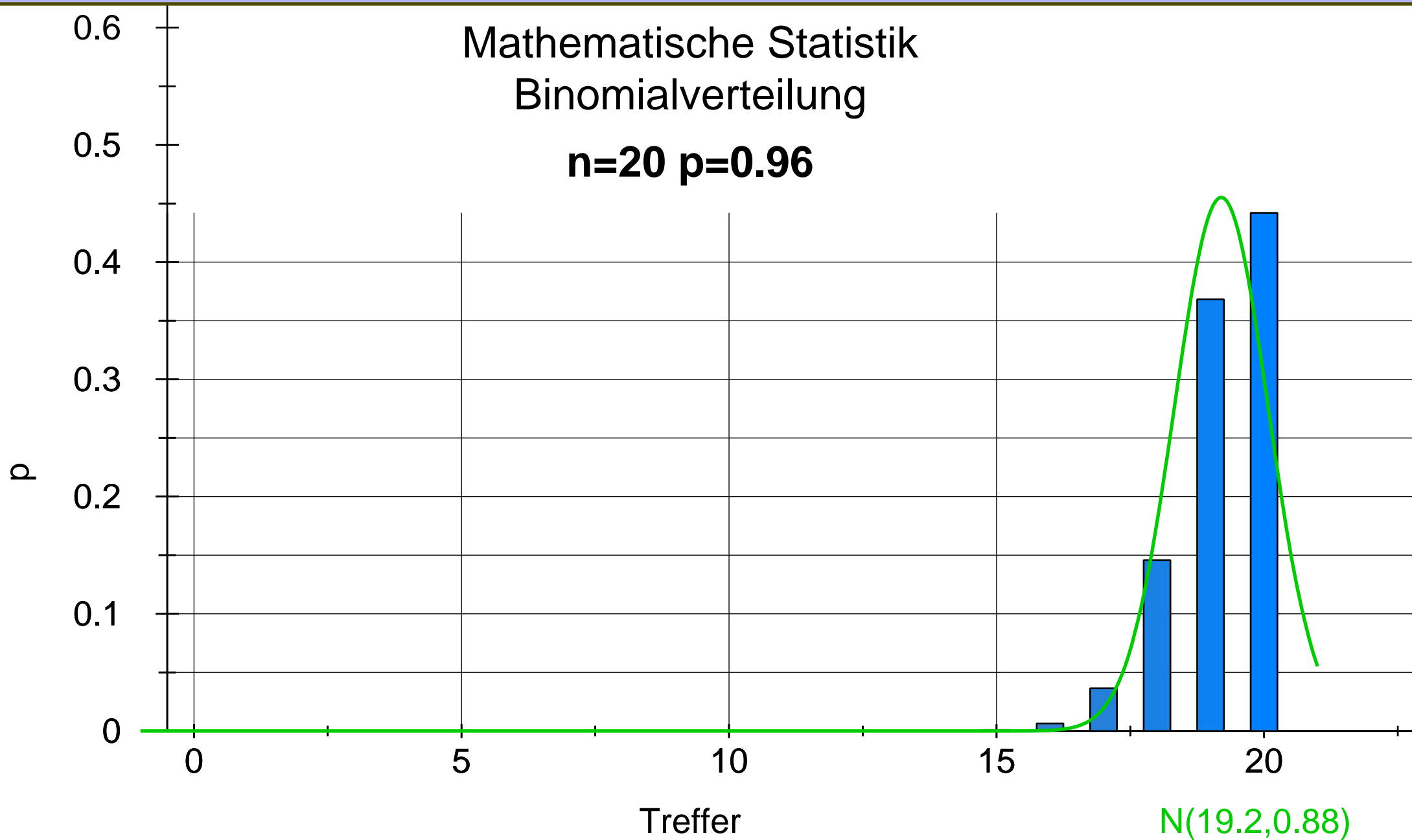


Mathematische Statistik  
Binomialverteilung

**n=20 p=0.95**



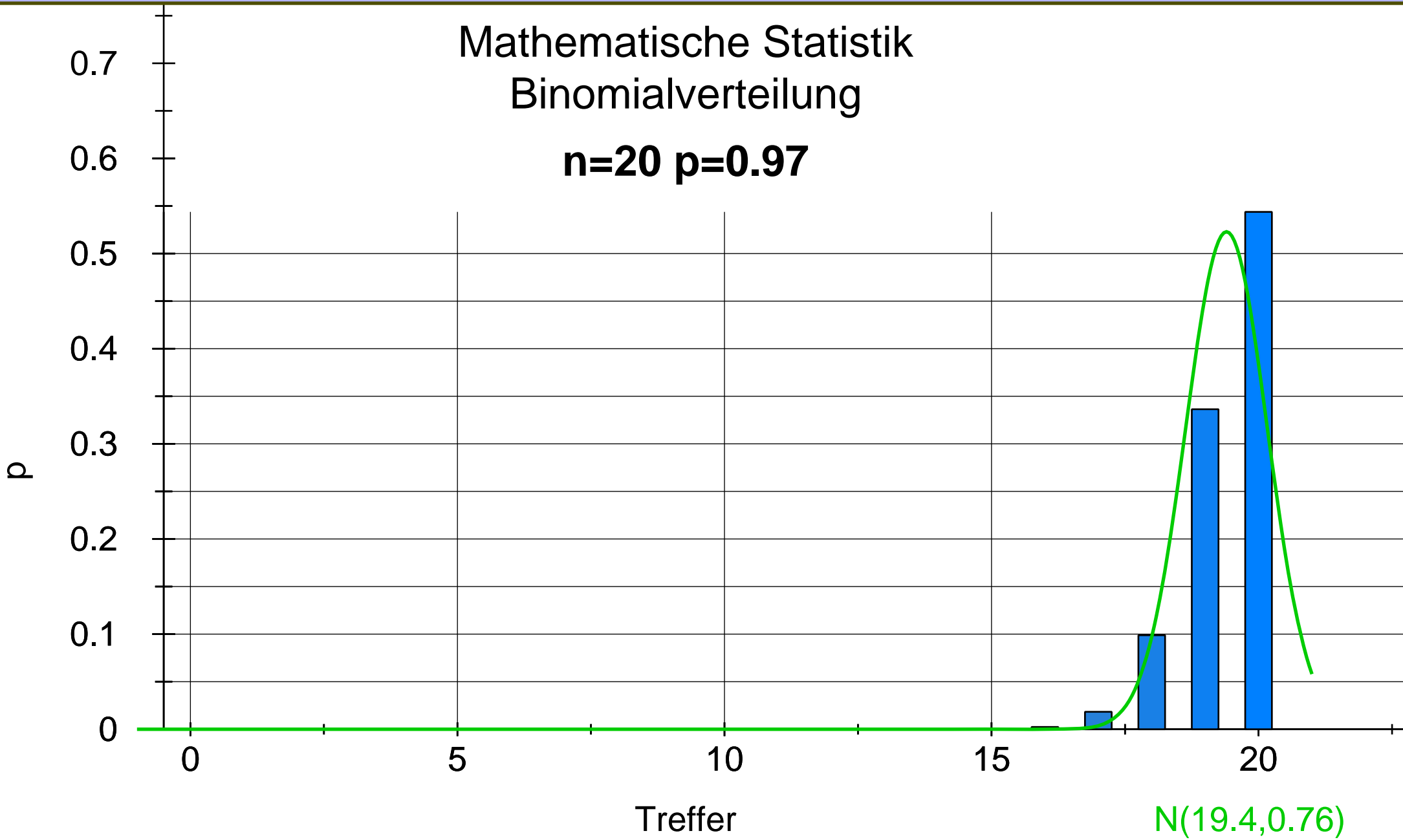
Mathematische Statistik  
Binomialverteilung  
**n=20 p=0.96**



$N(19.2, 0.88)$

# Mathematische Statistik Binomialverteilung

**n=20 p=0.97**

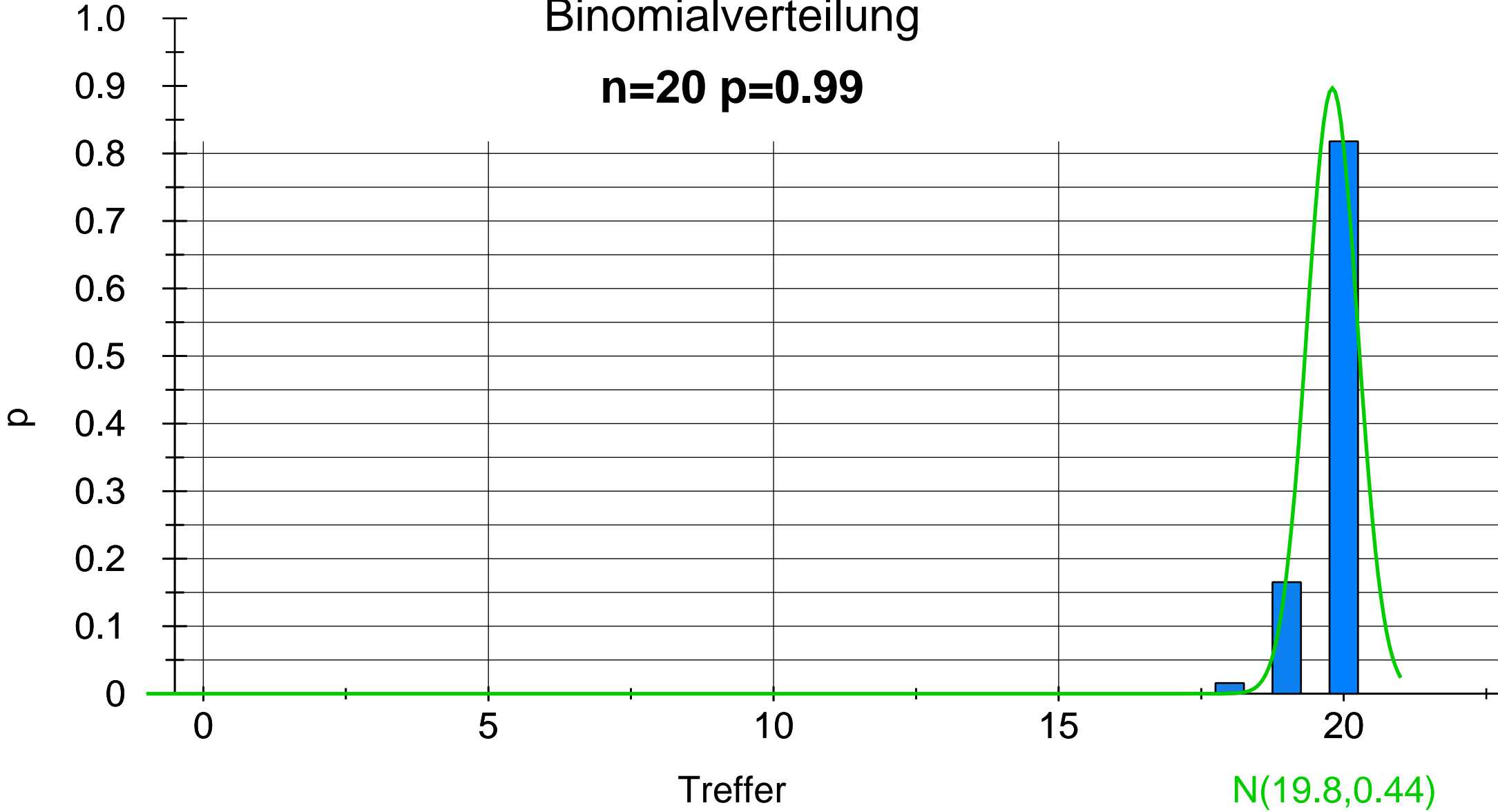




# Mathematische Statistik

## Binomialverteilung

**n=20 p=0.99**



# Mathematische Statistik

## Binomialverteilung

**n=20 p=0.99**

