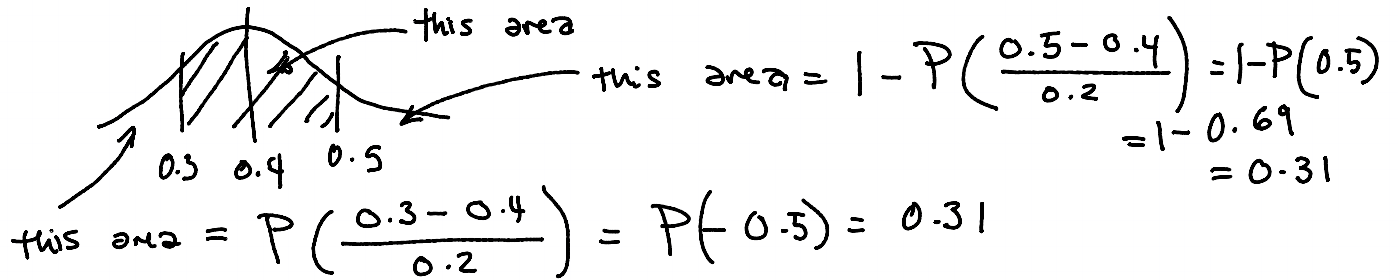


# Examples of Gaussian Noise Probability Calculations

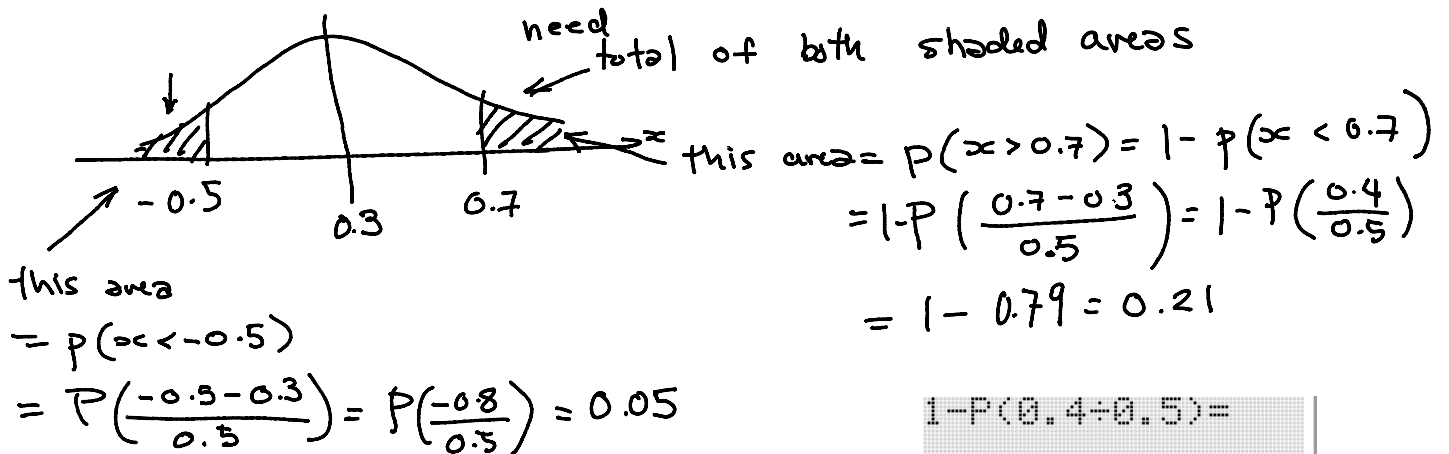
2020-10-21

probability that noise between 0.3 and 0.5 v  
 give  $\mu = 0.4$  &  $\sigma = 0.2$ :



total unshaded areas =  $0.31 + 0.31 = 0.62$   
 total shaded area =  $1 - 0.62 = \underline{\underline{0.38}}$

probability that noise  $> 0.7$  or noise  $< -0.5$   
 given  $\mu = 0.1$  and  $\sigma = 0.5$



$P(-0.8 \div 0.5) =$   
 0.054799

$1 - P(0.4 \div 0.5) =$   
 0.211856

total of both shaded areas =  $0.05 + 0.21 \approx \underline{\underline{0.26}}$