

In [13]:

연습문제 9 p214

from scipy.stats import chi2

df=[19, 5, 10, 18]

x=[30.14, 5, 3.24, 3.49]

c=[15.99, 17.53]

p_value = 1 - chi2.cdf(x[0], df[0])

print(f'P($X^2 > \{x[0]\}$) = {round((p_value), 2)}')

p_value = 1 - chi2.cdf(x[1], df[1])

print(f'P($X^2 > \{x[1]\}$) = {round((p_value), 3)}')

p = chi2.cdf(c[0], df[2]) - chi2.cdf(x[2], df[2])

print(f'P($\{x[2]\} < X^2 < \{c[0]\}$) : {round((p), 3)}')

p = chi2.cdf(c[1], df[3]) - chi2.cdf(x[3], df[3])

print(f'P($\{x[3]\} < X^2 < \{c[1]\}$) : {round((p), 3)}')

$P(X^2 > 30.14) = 0.05$

$P(X^2 > 5) = 0.416$

$P(3.24 < X^2 < 15.99) : 0.875$

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