

Statistics Lecture 12



Feb 19-8:47 AM

Find $Z_{\alpha/2}$ for 96% Conf. level.

Middle Area .96

$1 - .96 = .04 \leftarrow \alpha$

$.04/2 = .02 \leftarrow \alpha/2$

Area on each tail

$\mu=0$
 $\sigma=1$

$Z_{\alpha/2} = Z_{.02} = \text{invNorm}(.98, 0, 1)$

≈ 2.054

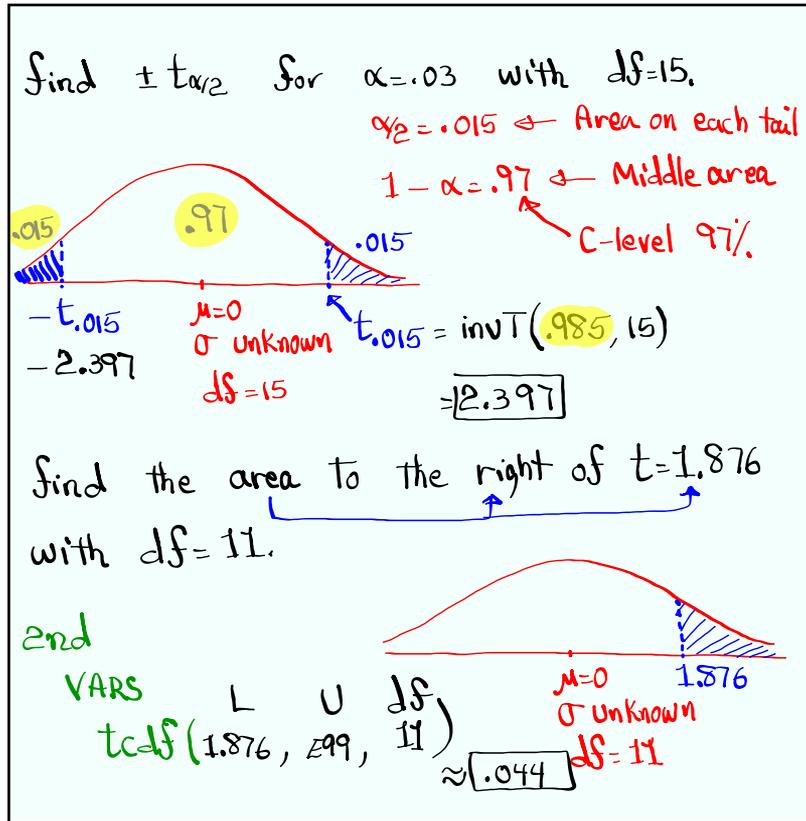
Find twice the area to the left of $Z = -3.456$

$2 * \text{normalcdf}(-E99, -3.456, 0, 1)$

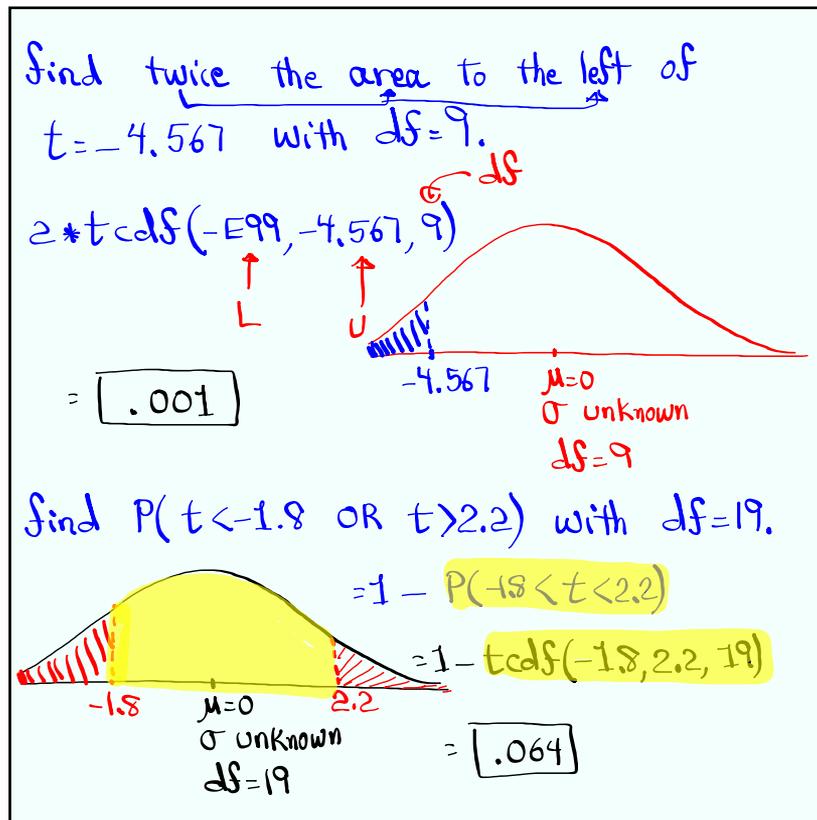
$= 5.5 \times 10^{-4}$

-3.456 $\mu=0$
 $\sigma=1$

May 16-8:08 AM



May 16-8:14 AM



May 16-8:22 AM

Chi-Square dist.

χ^2 - Dist.

Positively

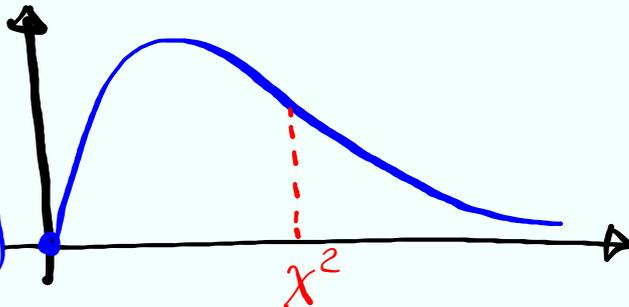
1) Graph begins at 0 and is skewed to the right.

2) Not symmetric but total area is 1.

For finding areas

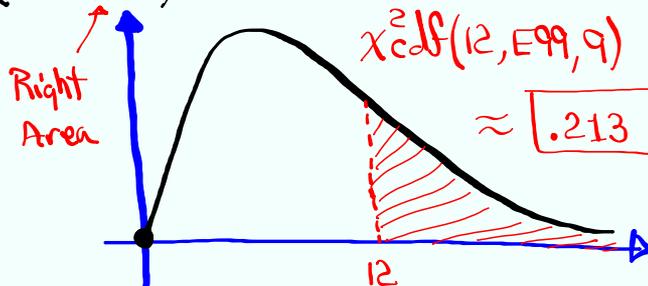
2nd VARS

χ^2 cdf(L, U, df)

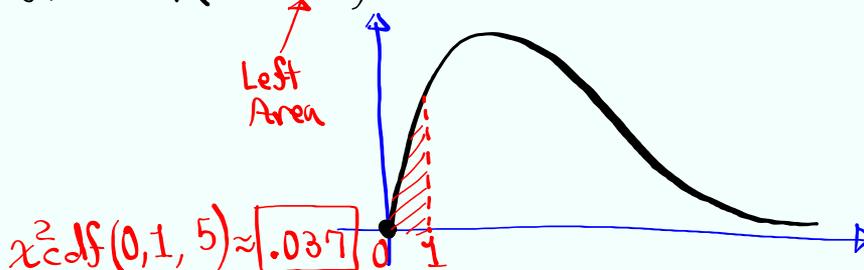


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find $P(\chi^2 > 12)$ with $df=9$.

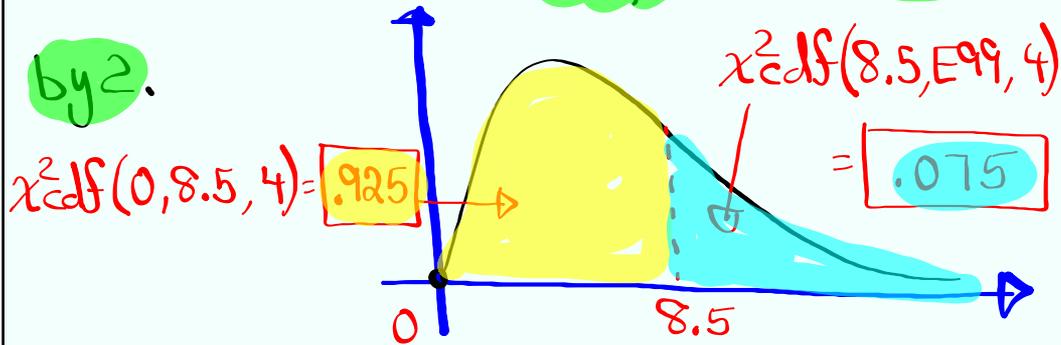


find $P(\chi^2 < 1)$ with $df=5$.



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Find the area on both sides of $\chi^2=8.5$ with $df=4$, then multiply the smaller area by 2.



$$2 * \text{Smaller area} = 2 * (.075) = .150$$

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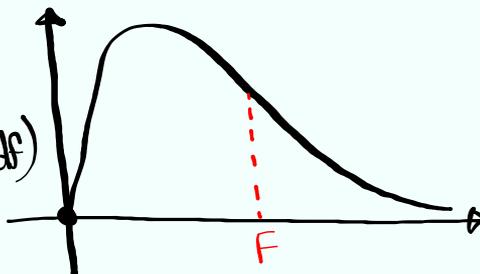
F-Dist.

- 1) Graph is similar to χ^2 -Dist. graph. Starts at 0, Positively Skewed
 - 2) It comes with two degrees of freedom. Total area 1 Not Symmetric
- Ndf numerator df
Ddf denominator df

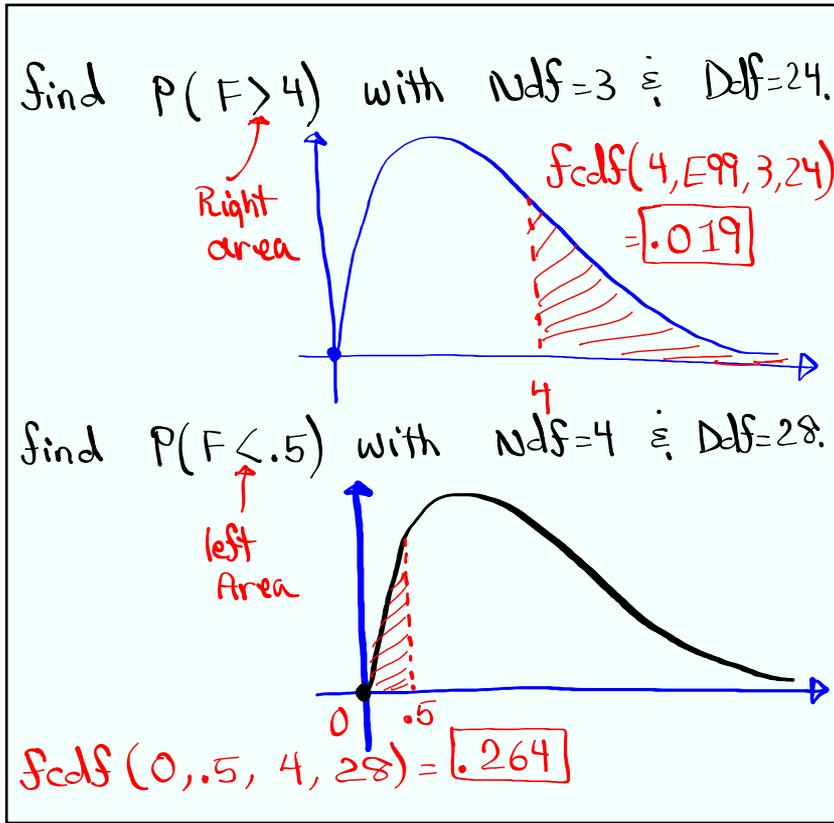
2nd VARS

Fcdf(L, U, Ndf, Ddf)

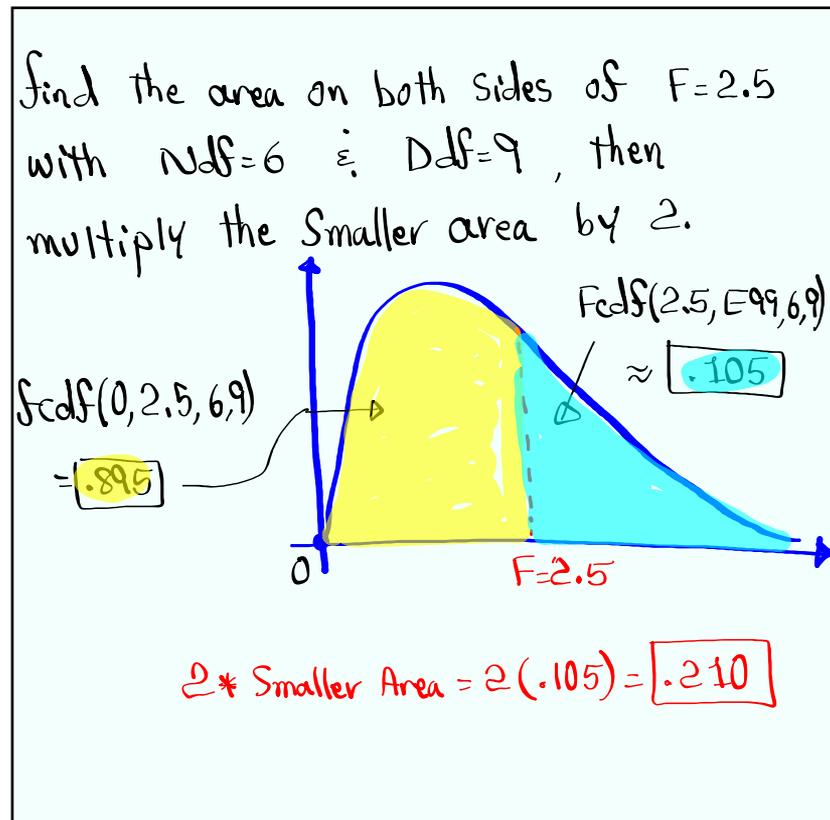
To find areas/Prob.



May 16-8:45 AM



May 16-8:50 AM



May 16-8:55 AM