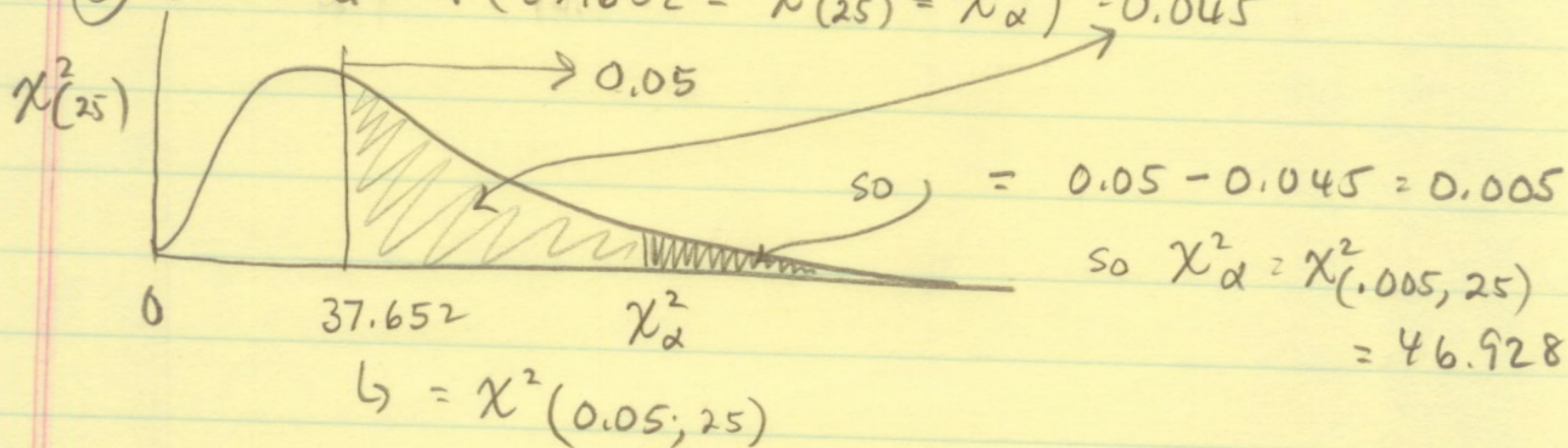


8.39

- (a) $\nu = 15 = df$ $\chi^2(.025; 15) = 27.488$
 (b) $\nu = 7 = df$ $\chi^2(0.01; 7) = 18.475$
 (c) $\nu = 24 = df$ $\chi^2(0.05; 24) = 36.415$

8.41

- (a) $\nu = 4 = df$ $P(\chi^2_{(4)} \geq \chi^2_{(.99)}) = 0.99 \therefore \chi^2_{(.99; 4)} = 0.297$
 (b) $\nu = 19 = df$ $P(\chi^2_{(19)} \geq \chi^2_{(.025)}) = 0.025 \therefore \chi^2_{(0.025; 19)} = 32.852$
 (c) $\nu = 25 = df$ $P(37.652 \leq \chi^2_{(25)} \leq \chi^2_{\alpha}) = 0.045$



8.46

- (a) $\nu = 14 = df$ $t(0.025; 14) = 2.145$
 (b) $\nu = 10 = df$ $-t(0.10, 10) = -[t(0.10, 10)] = -[1.372] = -1.372$
 (c) $\nu = 7 = df$ $t(.995, 7) = -[t(0.005; 7)] = -[3.499] = -3.499$

8.47

- (a) $\nu = 7 = df$ $P(T_{(7)} < 2.365) = 1 - P(T_{(7)} \geq 2.365) = 1 - 0.025 = 0.975$
 (b) $\nu = 24 = df$ $P(T_{(24)} > 1.318) = 0.10$
 (c) $\nu = 12 = df$ $P(-1.356 \leq T_{(12)} \leq 2.179)$
 $= P(T_{(12)} \leq 2.179) - P(T_{(12)} < -1.356) = [1 - P(T_{(12)} > 2.179)] - P(T_{(12)} > +1.356)$
 $= [1 - 0.0025] - 0.10 = 0.975 - 0.10 = 0.875$
 (d) $Pr(T_{(17)} > -2.567) = P(T_{(17)} < 2.576) = 1 - P(T_{(17)} > 2.576)$
 $= 1 - 0.01 = 0.99.$