

Two Sample TTest

1. 25 samples were taken from each team. Vincent has 50 battle points, STD DEV 25. And Vince has 45 battle points, STD DEV 20. Are they similar in terms of points?

$$H_0 = \mu_1 = \mu_2$$

$$H_A = \mu_1 \neq \mu_2$$

$$X_1 = 50$$

$$X_2 = 45$$

$$S_1 = 25$$

$$S_2 = 20$$

$$N_1 = 25$$

$$N_2 = 25$$

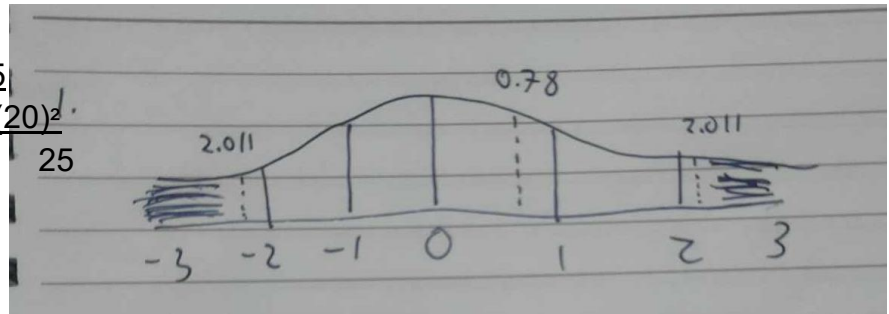
$$df = (25+25)-2 = 48$$

$$CV = 2.011$$

$$t = \frac{50-45}{\sqrt{\frac{(25)^2}{25} + \frac{(20)^2}{25}}}$$

$$= \frac{5}{6.40}$$

$$= 0.78$$



Conclusion:

Accept the null hypothesis that the two points are similar

2. 10 samples were taken from each group. Blue team has 20 points, STD DEV 11. And Red team has 21 points, STD DEV 15. Are they similar in terms of points?

$$H_0 = \mu_1 = \mu_2$$

$$H_A = \mu_1 \neq \mu_2$$

$$X_1 = 20$$

$$X_2 = 21$$

$$S_1 = 11$$

$$S_2 = 15$$

$$N_1 = 10$$

$$N_2 = 10$$

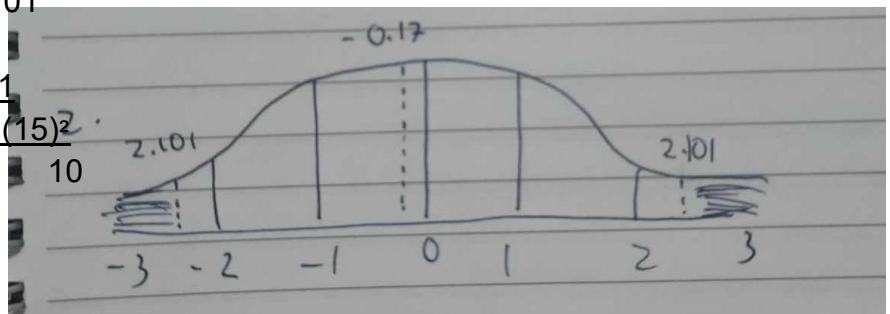
$$df = (10+10)-2 = 18$$

$$CV = 2.101$$

$$t = \frac{20-21}{\sqrt{\frac{(11)^2}{10} + \frac{(15)^2}{10}}}$$

$$= \frac{-1}{5.88}$$

$$= -0.17$$



Conclusion:

Accept the null hypothesis that the two points are similar