

ECE 376: Handout #16b

t-Test with Two Populations

The number of points the Vikings scored in the first six weeks are:

- Points Scored by Vikings: {23, 24, 28, 28, 29, 24}
- Mean = 26.00
- Standard Deviation = 2.61

The number of points the Packers scored in the first five weeks are:

- Points Scored by Packers: {7, 14, 22, 21, 9}
- Mean = 14.60
- Standard Deviation = 6.80

a) What is the probability that the Vikings will beat the Packers the next time they play?

- Vikings win a one-game series

b) What is the probability that the Vikings are the better team?

- Vikings win an infinite-game series

Student t-Table (Area of Tail)									
df \ p	0.1%	0.25%	0.5%	1%	2.5%	5%	10%	15%	20%
1	-636.619	-318.309	-63.6567	-31.8205	-12.7062	-6.3138	-3.0777	-1.9626	-1.3764
2	-31.5991	-22.3271	-9.9248	-6.9646	-4.3027	-2.92	-1.8856	-1.3862	-1.0607
3	-12.924	-10.2145	-5.8409	-4.5407	-3.1824	-2.3534	-1.6377	-1.2498	-0.9785
4	-8.6103	-7.1732	-4.6041	-3.7469	-2.7764	-2.1318	-1.5332	-1.1896	-0.941
5	-6.8688	-5.8934	-4.0321	-3.3649	-2.5706	-2.015	-1.4759	-1.1558	-0.9195
6	-5.9588	-5.2076	-3.7074	-3.1427	-2.4469	-1.9432	-1.4398	-1.1342	-0.9057
7	-5.4079	-4.7853	-3.4995	-2.998	-2.3646	-1.8946	-1.4149	-1.1192	-0.896
8	-5.0413	-4.5008	-3.3554	-2.8965	-2.306	-1.8595	-1.3968	-1.1081	-0.8889
9	-4.7809	-4.2968	-3.2498	-2.8214	-2.2622	-1.8331	-1.383	-1.0997	-0.8834
10	-4.5869	-4.1437	-3.1693	-2.7638	-2.2281	-1.8125	-1.3722	-1.0931	-0.8791
100	-3.3905	-3.1737	-2.6259	-2.3642	-1.984	-1.6602	-1.2901	-1.0418	-0.8452