

Table 1: Data

13	9
14	11
14	12
15	12
16	14
17	16
17	18
18	18
19	18
20	19
22	20
23	20

Formula for paired sample t-test: $t = \frac{x_{diff}}{s_{diff}/\sqrt{n}}$

Table 2: Work

13	9	4
14	11	3
14	12	2
15	12	3
16	14	2
17	16	1
17	18	-1
18	18	0
19	18	1
20	19	1
22	20	2
23	20	3
Mean of Differences:		1.75
Standard Deviation of Differences:		1.422

$$t = \frac{x_{diff}}{s_{diff}/\sqrt{n}}$$

$$t = \frac{1.75}{1.422/\sqrt{12}}$$

$$t = 4.26$$

$$df = 12 - 1 = 11$$

All we care about is whether they are different: 2-tail test.