#2 P. 286 (5.1)

Men (X_i):	74	72	77	76	76	73	75	73	74	75
$R(X_i)$	(5.5)	(1)	(13)	(10.5)	(10.5)	(3)	(8)	(3)	(5.5)	(8)
Women (Y_i):	75	77	78	79	77	73	78	79	78	80
$R(Y_i)$	(8)	(13)	(16)	(18.5)	(13)	(3)	(16)	(18.5)	(16)	(20)

$H_0: EX = EY$ or $\mu_1 = \mu_2$

$H_a: EX \neq EY$ $\mu_1 \neq \mu_2$

$\begin{cases} n = 10 \\ m = 10 \\ N = 20 \end{cases}$

$T = \sum_{i=1}^{n} R(X_i) \Rightarrow \underline{T = 68}$

$T' = \sum_{i=1}^{m} R(Y_i) \Rightarrow T' = 142$

or $= n(N+1) - T = 10(21) - 68 = 210 - 68 = \underline{142}$

$C = \{T: T < w_{\alpha/2} \text{ or } T > w_{1-\alpha/2}\}$ Table A7

Since $T = 68 < w_{.025} = 79$ $\quad w_{.025}(10,10) = 79$

$\therefore$ reject H_0

The mean of temperature for M & W are not the same

or

$P.V = 2P(T < T)$

$= 2P(T < 68)$

$= 2(.002) = \underline{0.004} < \alpha = .05$

$\therefore$ reject H_0

	n
	10
m 10	.001 66
	.005 72

#2 cont

	73	75	77	77	78	78	78	79	79	80
72	-1	-3	-5	-5	-6	-6	-6	-7	-7	-8
73	0	-2	-4	-4	-5	-5	-5	-6	-6	-7
73	0	-2	-4	-4	-5	-5	-5	-6	-6	-7
74	1	-1	-3	-3	-4	-4	-4	-5	-5	-6
74	1	-1	-3	-3	-4	-4	-4	-5	-5	-6
75	2	0	-2	-2	-3	-3	-3	-4	-4	-5
75	2	0	-2	-2	-3	-3	-3	-4	-4	-5
76	3	1	-1	-1	-2	-2	-2	-3	-3	-4
76	3	1	-1	-1	-2	-2	-2	-3	-3	-4
77	4	2	0	0	-1	-1	-1	-2	-2	-3

$$K = W_{\alpha/2} - \frac{n(n+1)}{2}$$

$$= 79 - \frac{10(11)}{2} = 79 - 55 = 24$$

$W_{.025(10,10)} = 79$

$L = -5$

$U = -1$

$-55 \mu_1 - \mu_2 < -1$