

4.3

رأب  
راد فوم  
اس

Pop 1	Pop 2	Pop 3
12 35 12.5	2 17 2	4 23 4
15 42 15	7 29 7	16 45 16
9 30 9	13 35 12.5	11 5 1
10 30 9	5 25 5	3 20 3
6 26 6	14 41 4	8 30 9
5	11 32 11	5
	8	

N=16

7 8,9 7

$$\frac{7 \cdot 8 + 9 \cdot 9}{2} = \frac{30 + 81}{2} = 30$$

$\left\{ \begin{array}{l} H_0: \text{they have the same median} \\ H_a: \text{at least two of them have the different median} \end{array} \right.$

Grand median = 30

$$T = \frac{16}{6(10)} \left[ \frac{4}{5} + \frac{9}{6} + \frac{1}{5} \right] - \frac{16(6)}{10} = \frac{296}{60} (2.5) - \frac{96}{10} = 10.6667 - 9.6 = 1.0667$$

	Pop 1	Pop 2	Pop 3	
>30	2 1.875	3 2.25	1 1.875	6 a
≤30	3 3.125	3 3.75	4 3.125	10 b
	5 n1	6 n2	5 n3	16 N
			6 - 2.25 = 3.75	

$$E_{11} = \frac{(5)(6)}{16} = 1.875$$

$$T = \frac{(2-1.875)^2}{1.875} + \frac{(4-3.125)^2}{3.125} = .67$$

$$= 1.0667$$

$T \sim \text{Chi-sq} (df(3-1)=2)$

P-Value =  $P(T > .67) > .25$

$\chi_{.95}(df=2) = 5.99$

	$P=.75$
$k=2$	2.773