

$\frac{0}{3}$ d) i) Where the values of E and $O-E$
 $= 11.8$ ✓

The number of degrees of freedom is $(2-1) \times (4-1) = 3$. Hence $t(3)$ must be tested against 11.8. This gives a value for the SP of 0.0081, which is quite low, and so the null hypothesis of zero association can be rejected. *Now suggests what the association is. More women for cocaine, more men for marijuana.*

ii) Add the totals for each of men and women who tested positive for anything, and lose a Fisher of Chi squared test for zero association. The table to test is

1465 207
764 101

fisher (1465, 207, 764, 101)
SP (obtained direction) = 0.3277
SP (opposite direction) = 0.2814
SP (total) = 0.6091 ✓

The significance probability is quite high. There is insufficient evidence to reject the null hypothesis with an SP of 0.6091. If we accept the null hypothesis, i.e. that there is no difference between the propensity of men and women to take drugs, then given the result of (di), we might conclude that men and women tend to take different kinds of drugs, or we might say that women tend to be less likely to take marijuana, and more likely to take cocaine or other ^{non}therapeutic drugs.

$\frac{4}{4}$

(20)