|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Cross and****Labels** |  **Red Males** |  **Red Females** |  **White Males** |  **White Females** |  **Scarlet Males** |  **Scarlet Females** | **Roll****Total** |
| **F1 RM WF** |   |   |   |   |   |   |   |
| **ms18163** | 0 | 0 | 0 | 0 | 0 | 0 |   |
| **ms18033** | 3 | 33 | 0 | 0 | 0 | 0 |   |
| **Sum** | 3 | 33 | 0 | 0 | 0 | 0 | 36 |
| **Expected ratio** | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| **Expected values** | 0 | 18 | 18 | 0 | 0 | 0 | 36 |
| **Chisq** | 0 | 16.05555556 | 16.05555556 | 0 | 0 | 0 | 32.11111111 |
| **Passed Chisq?** | FALSE |   |   |   |   |   |   |
|  |  |  |  |  |  |  |  |
| **F2 RM WF** |   |   |   |   |   |   |   |
| **ms18033** | 17 | 18 | 0 | 0 | 0 | 0 |   |
| **Sum** | 17 | 18 | 0 | 0 | 0 | 0 | 35 |
| **Expected ratio** | 1 | 1 | 1 | 1 | 0 | 0 | 4 |
| **Expected values** | 8.75 | 8.75 | 8.75 | 8.75 | 0 | 0 |   |
| **Chisq** | 6.864285714 | 6.864285714 | 6.864285714 | 6.864285714 | 0 | 0 | 27.45714286 |
| **Passed Chisq?** | FALSE |   |   |   |   |   |   |
|  |  |  |  |  |  |  |  |
| **F1 WM RF** |   |   |   |   |   |   |   |
| **ms18163** | 9 | 14 | 0 | 0 | 0 | 0 |   |
| **ms18033** | 24 | 35 | 0 | 0 | 0 | 0 |   |
| **Sum** | 33 | 49 | 0 | 0 | 0 | 0 | 82 |
| **Expected ratio** | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| **Expected values** | 41 | 41 | 0 | 0 | 0 | 0 |   |
| **Chisq** | 39.02439024 | 39.02439024 | 0 | 0 | 0 | 0 | 78.04878049 |
| **Passed Chisq?** | TRUE |   |   |   |   |   |   |
|  |  |  |  |  |  |  |  |
| **F2 WM RF** |   |   |   |   |   |   |   |
| **ms18163** | 40 | 29 | 10 | 0 | 0 | 0 |   |
| **ms18033** | 49 | 10 | 0 | 0 | 0 | 0 |   |
| **ms18109** | 16 | 33 | 11 | 0 | 0 | 0 |   |
| **Sum** | 105 | 72 | 21 | 0 | 0 | 0 | 198 |
| **Expected ratio** | 1 | 2 | 1 | 0 | 0 | 0 | 4 |
| **Expected values** | 49.5 | 99 | 49.5 | 0 | 0 | 0 |   |
| **Chisq** | 47.52020202 | 95.04040404 | 47.52020202 | 0 | 0 | 0 | 190.0808081 |
| **Passed Chisq?** | FALSE |   |   |   |   |   |   |
|  |  |  |  |  |  |  |  |
| **F1 RM SF** |   |   |   |   |   |   |   |
| **ms18163** | 28 | 16 | 0 | 0 | 0 | 0 |   |
| **ms18033** | 56 | 28 | 0 | 0 | 0 | 0 |   |
| **Sum** | 84 | 44 | 0 | 0 | 0 | 0 | 128 |
| **Expected ratio** | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| **Expected values** | 0 | 64 | 0 | 0 | 64 | 0 |   |
| **Chisq** | 0 | 62.015625 | 0 | 0 | 62.015625 | 0 | 124.03125 |
| **Passed Chisq?** | FALSE |   |   |   |   |   |   |
|  |  |  |  |  |  |  |  |
| **F2 RM SF** |   |   |   |   |   |   |   |
| **ms18163** | 31 | 14 | 0 | 0 | 4 | 7 |   |
| **ms18033** | 40 | 14 | 0 | 0 | 2 | 2 |   |
| **Sum** | 71 | 28 | 0 | 0 | 6 | 9 | 114 |
| **Expected ratio** | 1 | 1 | 0 | 0 | 1 | 1 | 4 |
| **Expected values** | 28.5 | 28.5 | 0 | 0 | 28.5 | 28.5 |   |
| **Chisq** | 26.53508772 | 26.53508772 | 0 | 0 | 26.53508772 | 26.53508772 | 106.1403509 |
| **Passed Chisq?** | FALSE |   |   |   |   |   |   |
|  |  |  |  |  |  |  |  |
| **F1 SM RF** |   |   |   |   |   |   |   |
| **ms18033** | 33 | 14 | 0 | 0 | 0 | 0 |   |
| **ms18163** | 0 | 0 | 0 | 0 | 0 | 0 |   |
| **Sum** | 33 | 14 | 0 | 0 | 0 | 0 | 47 |
| **Expected ratio** | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| **Expected values** | 0 | 23.5 | 0 | 0 | 23.5 | 0 |   |
| **Chisq** | 0 | 21.54255319 | 0 | 0 | 21.54255319 | 0 | 43.08510638 |
| **Passed Chisq?** | FALSE |   |   |   |   |   |   |
|  |  |  |  |  |  |  |  |
| **F2 SM RF** |   |   |   |   |   |   |   |
| **ms18033** | 34 | 10 | 0 | 0 | 2 | 1 |   |
| **Sum** | 34 | 10 | 0 | 0 | 2 | 1 | 47 |
| **Expected ratio** | 1 | 2 | 0 | 0 | 1 | 0 | 4 |
| **Expected values** | 11.75 | 23.5 | 0 | 0 | 11.75 | 0 |   |
| **Chisq** | 9.835106383 | 19.67021277 | 0 | 0 | 9.835106383 | 0 | 39.34042553 |
| **Passed Chisq?** | FALSE |   |   |   |   |   |   |