

**Table 9.9** Observed and expected frequencies for call-centre test scores and chi-square calculation

| Test score      | Observed frequency ( $p_i$ ) | Expected frequency ( $e_i$ ) | Difference ( $p_i - e_i$ ) | Squared difference ( $p_i - e_i$ ) <sup>2</sup> | Squared difference divided by expected frequency ( $(p_i - e_i)^2/e_i$ ) |
|-----------------|------------------------------|------------------------------|----------------------------|-------------------------------------------------|--------------------------------------------------------------------------|
| Less than 35.67 | 3                            | 5                            | −2                         | 4                                               | 0.8                                                                      |
| 35.67 to 41.99  | 4                            | 5                            | −1                         | 1                                               | 0.2                                                                      |
| 41.99 to 46.56  | 5                            | 5                            | 0                          | 0                                               | 0                                                                        |
| 46.56 to 50.43  | 7                            | 5                            | 2                          | 4                                               | 0.8                                                                      |
| 50.43 to 54     | 8                            | 5                            | 3                          | 9                                               | 1.8                                                                      |
| 54 to 57.58     | 8                            | 5                            | 3                          | 9                                               | 1.8                                                                      |
| 57.58 to 61.44  | 6                            | 5                            | 1                          | 1                                               | 0.2                                                                      |
| 61.44 to 66.01  | 3                            | 5                            | −2                         | 4                                               | 0.8                                                                      |
| 66.01 to 72.30  | 2                            | 5                            | −3                         | 9                                               | 1.8                                                                      |
| Over 72.3       | 4                            | 5                            | −1                         | 1                                               | 0.2                                                                      |
| Totals          | 50                           | 50                           |                            | Chi-sq. =                                       | 8.4                                                                      |