# Answers and mark guide

| Q | Answer | Working | Marks |
|---|---|---|---|
| 1 | **400** | 40/N = 4/40; N = 40×40÷4 | 4 |
| 2 | **300** | 30/N = 10/100; N = 30×100÷10 | 4 |
| 3 | **240** | 30/N = 5/40; N = 30×40÷5 | 4 |
| 4 | **160** | 20/N = 5/40; N = 20×40÷5 | 4 |
| 5 | **720** | 60/N = 5/60; N = 60×60÷5 | 4 |
| 6 | **150** | N = 20 × 60 ÷ 8 | 4 |
| 7 | **800** | N = 40 × 100 ÷ 5 | 4 |
| 8 | **1000** | 50 × 80 ÷ 4 | 4 |
| 9 | **1000** | 50 × 80 ÷ 4 | 4 |
| 10 | **1/10** | 10/100 | 3 |
| 11 | **The marked animals mix fully with the population; the population does not change between samples** | Standard assumptions | 4 |
| 12 | **Marked fish may be less likely to be caught or may have died** | Marks reduce the recapture rate | 4 |
| 13 | **No** | Same proportion | 4 |
| 14 | **600** | 60 × 80 ÷ 8 | 4 |
| 15 | **A larger sample gives a more reliable proportion** | Less variation | 3 |
| 16 | **760** | Total estimate minus marked | 5 |
| 17 | **1/25** | 40/1000 | 4 |
| 18 | **30** | 15% of 200 | 4 |
| 19 | **490** | (480 + 500) ÷ 2 | 4 |
| 20 | **16** | 80 × 50/250 | 5 |

**My score: _____ / 80** Questions 1–15 = 58 marks (Foundation focus)