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| **Constructing Two-Way Tables** | | |
| **(a)** | **(b)** | **(c)** |
| A teacher asked two of her classes, 7A and 7B whether they were left or right handed.  In 7A, there were a total of 32 students and 11 of them were left-handed.  In 7B there were 19 right-handed students.  Across both classes, there was a total of 23 left-handed students.  (a) Complete a two-way table to show this information. | A librarian surveyed 100 people of different ages to find out their preferred type of fiction – crime, romance or fantasy.  Of the 36 under 40s who answered the survey, 11 preferred crime fiction.  A total of 28 people preferred romance novels.  Of the people who were aged 40 or over, 9 preferred romance and 22 preferred fantasy fiction.  (a) Complete a two-way table to show this information. | A teacher recorded the mock exam grades received for A-level Mathematics by students in each of her two classes.  There were two more students in class Y than in class X.  Class X contained 28 students and received 11 B grades.  Students in class Y receives twice as many A grades as those in class X.  The total number of students who got grade C was 15, and 7 of these students were in class Y.  (a) Complete a two-way table to show this information. |
| |  |  |  |  | | --- | --- | --- | --- | |  | Left | Right | Total | | 7A |  |  |  | | 7B |  |  |  | | Total |  |  |  | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | Crime | Romance | Fantasy | Total | | Under 40s |  |  |  |  | | 40 or over |  |  |  |  | | Total |  |  |  |  | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |
| (b) A student is chosen at random. Find the probability that they are left-handed.  (c) A right-handed student is chosen at random. Find the probability that they are in 7A. | (b) A person is chosen at random. Find the probability that they are under 40 and prefer either romance or fantasy fiction.  (c) A person who prefers crime fiction is chosen at random. Find the probability that they are aged 40 or over. | (b) A member of class X is chosen at random. Find the probability that they received a grade B or a grade C.  (c) All students that obtained a grade C will be required to re-sit their exam. If a student is chosen at random, what is the probability that they will not have to resit their exam? |