**Relative Frequency**

|  |  |  |
| --- | --- | --- |
| Name : | Class : | Date : |

|  |  |  |
| --- | --- | --- |
| Mark : | /10 | % |

|  |  |
| --- | --- |
| **1)** Connor has a biased dice. The probability of it landing on a a three is 0.8. Connor is going to throw the dice 120 times.Work out an estimate for the number of times the dice will land on a three.      | [1]   |
| **2)** Mason has a biased coin. The probability of it landing on a a head is 0.7. Mason is going to toss the coin 110 times.Work out an estimate for the number of times the coin will land on a head.      | [1]   |
| **3)** Evelyn rolls a dice 132 times.Work out an estimate for the number of times Evelyn rolls a number less than 4      | [1]   |
| **4)** Luca rolls a dice 348 times.Work out an estimate for the number of times Luca rolls an odd number      | [1]   |
| **5)** The scores for a group of students are recorded in the table below.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Score** | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| **Frequency** | 1 | 1 | 8 | 13 | 5 | 1 | 2 |

Find the probability of selecting a studenta)  with a score of 5       b)  with a score of 3        | [1]   |
| **6)** The scores for a group of students are recorded in the table below.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Score** | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **Frequency** | 1 | 1 | 6 | 7 | 4 | 2 | 2 |

Find the probability of selecting a studenta)  with a score less than or equal to 9       b)  with a score greater than 8        | [1]   |
| **7)** The scores for a group of students are recorded in the table below.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Score** | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| **Frequency** | 3 | 3 | 6 | 13 | 12 | 2 | 3 |

Find the probability of selecting a studenta)  with a score less than or equal to 12       b) with a score greater than 8        | [1]   |
| **8)** The test results of 64 students is recorded in the two-way table below. One student is chosen at random.

|  |  |  |
| --- | --- | --- |
|   | **Grade** | **Total** |
| **A** | **B** | **C** |
| **Male** | 8 | 11 | 15 | 34 |
| **Female** | 10 | 18 | 2 | 30 |
| **Total** | 18 | 29 | 17 | 64 |

Find the probability that the student is male and got a grade A.           | [1]   |
| **9)** The test results of 93 students is recorded in the two-way table below. One student is chosen at random. Find the probability that the student got a B.

|  |  |  |
| --- | --- | --- |
|   | **Grade** | **Total** |
| **A** | **B** | **C** |
| **Male** | 14 | 16 | 18 | 48 |
| **Female** | 15 | 11 | 19 | 45 |
| **Total** | 29 | 27 | 37 | 93 |

      | [1]   |
| **10)** The test results of a group of students is recorded in the two-way table below. One student is chosen at random. Find the probability that the student got a C.

|  |  |
| --- | --- |
|   | **Grade** |
| **A** | **B** | **C** |
| **Male** | 15 | 10 | 6 |
| **Female** | 11 | 8 | 4 |

      | [1]   |

**Solutions for the assessment Relative Frequency**

|  |  |
| --- | --- |
| **1)**  $96$ | **2)**  $77$ |
| **3)**  $66$ | **4)**  $174$ |
| **5)** a) P(score of 5) = 1/31, b) P(score of 3) = 13/31 | **6)** a) P(less than or equal to 9) =  $\frac{21}{23}$, b) P(greater than 8) =  $\frac{4}{23}$ |
| **7)** a) P(less than or equal to 12) =  $\frac{13}{14}$, b) P(greater than 8) =  $\frac{6}{7}$ | **8)** P(male and got a grade A) =  $\frac{1}{8}$ |
| **9)** P(got a B) =  $\frac{9}{31}$ | **10)** P(got a C) =  $\frac{5}{27}$ |