**Relative Frequency**

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

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

|  |  |
| --- | --- |
| **1)** Georgia has a biased dice. The probability of it landing on a a four is 0.4. Georgia is going to throw the dice 140 times.Work out an estimate for the number of times the dice will land on a four.      | [1]   |
| **2)** Freya has a biased coin. The probability of it landing on a a tail is 0.6. Freya is going to toss the coin 180 times.Work out an estimate for the number of times the coin will land on a tail.      | [1]   |
| **3)** Phoebe rolls a dice 522 times.Work out an estimate for the number of times Phoebe rolls an odd number      | [1]   |
| **4)** Theo rolls a dice 306 times.Work out an estimate for the number of times Theo rolls an even number      | [1]   |
| **5)** The scores for a group of students are recorded in the table below.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Score** | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **Frequency** | 1 | 1 | 6 | 4 | 9 | 3 | 2 |

Find the probability of selecting a studenta)  with a score of 7       b)  with a score of 4        | [1]   |
| **6)** The scores for a group of students are recorded in the table below.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Score** | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **Frequency** | 3 | 3 | 5 | 6 | 7 | 1 | 1 |

Find the probability of selecting a studenta)  with a score less than or equal to 6       b)  with a score greater than 5        | [1]   |
| **7)** The scores for a group of students are recorded in the table below.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Score** | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| **Frequency** | 3 | 3 | 4 | 9 | 14 | 3 | 1 |

Find the probability of selecting a studenta)  with a score less than or equal to 5       b) with a score greater than 4        | [1]   |
| **8)** The test results of 74 students is recorded in the two-way table below. One student is chosen at random.

|  |  |  |
| --- | --- | --- |
|   | **Grade** | **Total** |
| **A** | **B** | **C** |
| **Male** | 3 | 18 | 15 | 36 |
| **Female** | 17 | 12 | 9 | 38 |
| **Total** | 20 | 30 | 24 | 74 |

Find the probability that the student is female and got a grade A.           | [1]   |
| **9)** The test results of 80 students is recorded in the two-way table below. One student is chosen at random. Find the probability that the student is male.

|  |  |  |
| --- | --- | --- |
|   | **Grade** | **Total** |
| **A** | **B** | **C** |
| **Male** | 3 | 17 | 14 | 34 |
| **Female** | 18 | 8 | 20 | 46 |
| **Total** | 21 | 25 | 34 | 80 |

      | [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 B.

|  |  |
| --- | --- |
|   | **Grade** |
| **A** | **B** | **C** |
| **Male** | 20 | 16 | 18 |
| **Female** | 15 | 13 | 3 |

      | [1]   |

**Solutions for the assessment Relative Frequency**

|  |  |
| --- | --- |
| **1)**  $56$ | **2)**  $108$ |
| **3)**  $261$ | **4)**  $153$ |
| **5)** a) P(score of 7) = 3/26, b) P(score of 4) = 3/13 | **6)** a) P(less than or equal to 6) =  $\frac{12}{13}$, b) P(greater than 5) =  $\frac{9}{26}$ |
| **7)** a) P(less than or equal to 5) =  $\frac{36}{37}$, b) P(greater than 4) =  $\frac{4}{37}$ | **8)** P(female and got a grade A) =  $\frac{17}{74}$ |
| **9)** P(is male) =  $\frac{17}{40}$ | **10)** P(got a B) =  $\frac{29}{85}$ |