☰ **Lesson 2 Assignment**

Theoretical and Experimental Probability – Part B

Work slowly and carefully. If you are having difficulty, go back and review the appropriate *Lesson*.

For full marks, show all calculations, steps, and/or explain your answers.

Total marks: 19

11.   Antoinette rolled a six-sided die 80 times, and ten of the rolls landed on a 4.

(2)   a. What is the experimental probability of rolling a 4?

(2)   b. What is the theoretical probability of rolling a 4?

(1)   c. If the number of trials is increased, what would you expect to happen to the experimental probability of rolling a 4? Explain.

12. Benoit observed that 27 out of 85 patrons at the public library used a computer. The librarian told Benoit that 675 patrons enter the library throughout the day. Answer the following questions based on Benoit's observations.

(2)   a. Calculate the probability that a patron would use a computer at the library.

(2)   b. How many patrons during the day would be expected to use a computer?

13. Sasha surveys 200 people and asks them their blood type. She recorded the results in a table.

Blood Type	Number of People
A	84
B	18
O	92
AB	6

(2)   a. Calculate the probability that a person has type B blood.

(2)   b. If 47 people donate blood, approximately how many will have type B blood?

14. In an election, five candidates are running for school trustee. The names of the candidates are Jane Knor, Peter McPhee, Kim Yun, Isaac Unrau, and Patricia Jankowska.

(2)   a. What is the theoretical probability that a person would vote for Peter McPhee?

①   b.   Why should the experimental probability, instead of the theoretical probability, be used to predict who will win the election?

②   c.   A poll taken a week before the election found the following results.

Candidate	Votes
Jane Knor	45
Peter McPhee	21
Kim Yun	116
Isaac Unrau	85
Patricia Jankowska	167
Undecided	16

Based on the poll results, calculate the experimental probability that a random person polled would vote for Peter McPhee.

①   d.   If $2\,700$ people vote, predict how many people will vote for Peter McPhee.