**End of Unit Test** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Probability - HIGHER**

**1.** (a) In a statistical experiment a fair, ordinary dice is rolled. Tick a box to show the

correct ending to the sentence below.

When this statistical experiment is repeated you will:

 always get the same outcome □

 usually get the same outcome □

 usually get a different outcome □

 always get a different outcome  □

**(1)**

(b) Tick a box to show the correct ending to the sentence below.

An estimate of probability based on a statistical experiment is more reliable with

 more trials □

 fewer trials □

 more time between trials □

 less time between trials □

 **(1)**

**(Total 2 marks)**

**2.** An ordinary fair dice is rolled 120 times. How many times would you expect to roll a 6?

 …………………………………………………………………………………………………………..

 …………………………………………………………………………………………………………..

 …………………………………………………………………………………………………………..

Answer ......................................................................

**(Total 2 marks)**

**3.** A team has 7 boys and 3 girls. Stevie chooses two of the team at random.

(a) Complete the probability tree diagram.



**(3)**

(b) Work out the probability that he chooses one boy and one girl.

 …………………………………………………………………………………………………..

 …………………………………………………………………………………………………..

 …………………………………………………………………………………………………..

 …………………………………………………………………………………………………..

Answer ......................................................................

**(3)**

**(Total 6 marks)**

**4.** The probability that Simon passes his driving test is $\frac{3}{5}$. The probability that Kim passes her driving test is $\frac{4}{7}$. Work out the probability that at **least** one of them passes the driving test.

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Answer ......................................................................

**(Total 3 marks)**

**5.** (a) Shade the Venn diagram to show the region $(A∪B)'$.

 

**(1)**

(b) Shade the Venn diagram to show the region $A∩B'$.



**(1)**

**(Total 2 marks)**

**6.** Here is a Venn diagram. It shows information about the number of students who have a laptop or a TV. Set L represents students with a laptop. Set T represents students with a TV.



There are 50 students altogether. A student is chosen at random.

(a) Work out $P(L)$.

Answer .............................................................................

**(1)**

(b) Work out $P(L∩T)$.

Answer .............................................................................

**(1)**

(c) Complete the following using set notation.

$P( $………………………$)= \frac{21}{50}$

**(1)**

(d) Complete the following using set notation.

$P( $………………………$)= \frac{4}{5}$

 **(2)**

**(Total 5 marks)**

 **(Total for test = 20 marks)**