**Name:**

## 1) Complete the sample spaces:

**a)** Two spinners numbered 1 to 4 are spun and the scores are added.

|   | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1 |   |   |   |   |
| 2 | 3 |   |   |   |
| 3 |   |   | 6 |   |
| 4 |   |   |   |   |

**b)** A fair six sided dice is rolled and a coin is flipped.

|   | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| H |   |   | H3 |   |   |   |
| T | T1 |   |   |   |   |   |

**c)** A six sided dice is rolled and a spinner with numbers 1 to 3 spun. Their scores are multiplied.

|   | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1 |   |   |   |   |   |   |
| 2 | 2 |   |   |   |   | 12 |
| 3 |   |   | 9 |   |   |   |

**d)** Two fair sided dice are rolled and their scores are added.

|   | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1 |   |   |   |   |   |   |
| 2 | 3 |   |   |   |   |   |
| 3 |   |   |   |   |   |   |
| 4 |   |   | 7 |   |   |   |
| 5 |   |   |   | 10 |   |   |
| 6 | 7 |   |   |   |   |   |

**e)** Two fair sided dice are rolled and their scores are multiplied.

|   | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1 |   |   |   |   |   |   |
| 2 | 2 |   |   |   |   |   |
| 3 |   |   | 9 |   |   |   |
| 4 |   |   |   |   |   |   |
| 5 |   |   |   |   | 25 |   |
| 6 |   |   |   |   |   |   |

**f)** Two spinners are spun. Spinner A is numbered 0, 1, 2, 4, 6, 8 and spinner B, numbered 1 to 4.

The score of spinner B is subtracted from the score of spinner A.

|   | 0 | 1 | 2 | 4 | 6 | 8 |
|---|---|---|---|---|---|---|
| 1 |   |   |   | 3 |   |   |
| 2 |   |   |   |   |   | 6 |
| 3 |   |   |   |   |   |   |
| 4 |   | -3 |   |   |   | 4 |

## 2) Use the sample spaces to answer the probability questions.

|   | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1 | 1 | 2 | 3 | 4 |
| 2 | 2 | 4 | 6 | 8 |
| 3 | 3 | 6 | 9 | 12 |
| 4 | 4 | 8 | 12 | 16 |

a) What is the probability of scoring a 6?

b) What is the probability of scoring greater than 5?

c) What is the probability of scoring an odd number?

|   | 0 | 1 | 2 | 4 | 6 | 8 |
|---|---|---|---|---|---|---|
| 1 | -1 | 0 | 1 | 3 | 5 | 7 |
| 2 | -2 | -1 | 0 | 2 | 4 | 6 |
| 3 | -3 | -2 | -1 | 1 | 3 | 5 |
| 4 | -4 | -3 | -2 | 0 | 2 | 4 |

d) What is the probability of scoring a negative number?

e) What is the probability of scoring an even number?

f) What is the probability of **not** scoring a zero?

|   | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3 | 3 | 4 | 5 | 6 | 7 | 8 |
| 4 | 4 | 5 | 6 | 7 | 8 | 9 |

g) What is the probability of scoring an multiple of 3?

h) What is the probability of scoring a factor of 12?

i) What is the probability of **not** scoring an prime number?

## Exam question:

Two spinners are spun and the numbers are multiplied. Some results are shown in the sample space.

a) Complete the sample space

b) What is the probability that the result is an **odd** number?

Spinner A

| Spinner B |   | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|
|   | 1 |   |   |   |   |
|   | 2 | 10 |   |   |   |
|   | 3 |   |   | 21 |   |
|   | 4 |   |   |   | 32 |