

Name: \_\_\_\_\_

1. (a) List all the different ways that the letters W, N and O can be arranged.

W N O

- (b) If these three letters are arranged randomly, what is the probability that they spell an actual word?

2. Max is a spy. He has discovered a bomb that needs to be disarmed. To disarm the bomb he needs to cut three wires - red, blue and yellow. The problem is he needs to cut them in the correct order. If he cuts them in an incorrect order it will explode.

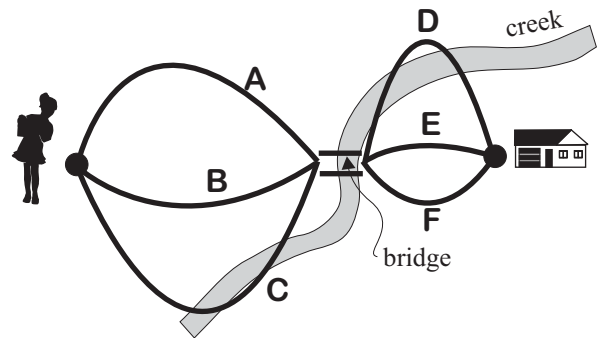
- (a) List all the different ways that the wires can be cut.

First Cut	Second Cut	Third Cut

- (b) What is the probability of randomly choosing the *correct* order to cut the wires.

- (c) What is the probability of randomly choosing the *incorrect* order to cut the wires.

3. Jane wants to go to a friend's house. There are 3 tracks (A, B, C) to take through the forest to the bridge and a further 3 tracks (D, E, F) after the bridge to her friend's house.



She doesn't realise that two of the tracks (C and D) cross the creek and she will get wet feet.

- (a) List all possible combinations of tracks Jane can take to her friend's house. One is completed for you.

Before bridge	After bridge
A	D

- (b) In how many combinations will Jane get her feet wet?

- (c) What is the probability of Jane getting wet feet?