

Name _____

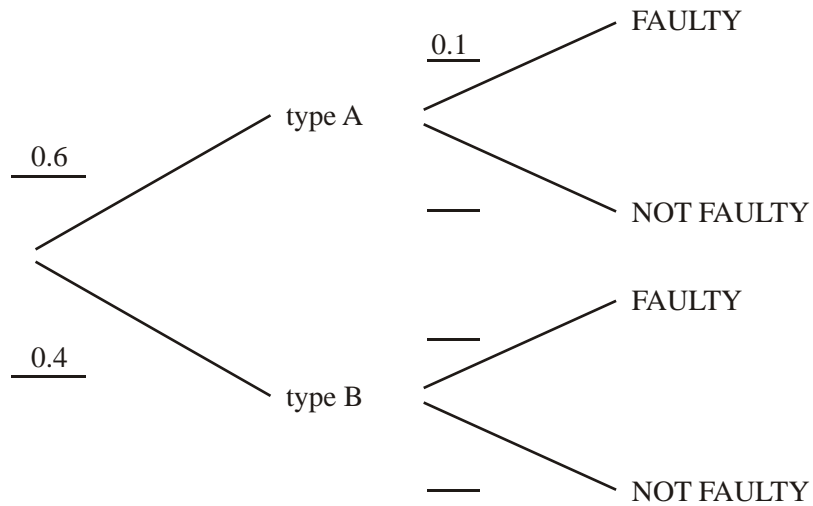
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**IB MATH STUDIES
QUIZ 2.2**

1. A teacher has a box containing six type A calculators and four type B calculators.

The probability that a type A calculator is faulty is 0.1 and the probability that a type B calculator is faulty is 0.12.

- (a) Complete the tree diagram given below, showing all the probabilities.



- (b) A calculator is selected at random from the box. Find the probability that the calculator is

(i) a faulty type A;

(ii) not faulty.

(Total 4 marks)

2. Two jars contain a number of coloured balls as indicated in the diagrams below.



Jar One



Jar Two

Two experiments are carried out.

First Experiment: A jar is first chosen at random and then a ball is drawn from that jar.

- (a) Draw, **and label fully**, a tree diagram to show **all** possible outcomes of this experiment. (2)

- (b) What is the probability that a white ball is drawn? (3)

Second Experiment: The ball drawn in the first experiment is not replaced. A second ball is then drawn from the same jar.

- (c) What is the probability that both balls are white? (2)

(Total 7 marks)

3. Nene and Dekka both play netball. The probability that Nene will score a goal on her first attempt is 0.75. The probability that Dekka will score a goal on her first attempt is 0.82.

Calculate the probability that

- (a) Nene and Dekka will both score a goal on their first attempts;
- (b) neither Nene nor Dekka will score a goal on their first attempts.

(Total 4 marks)