

PROBABILITY

Please do not write on the exam paper, and do not forget to give back the examination paper at the end of the test

The probability of rain tomorrow is estimated to be $\frac{1}{5}$.

If it does rain, the horse Mudlark will start favorite with probability $\frac{1}{3}$ of winning.

If it doesn't rain, he has a 1 in 20 chance of winning.

1. Draw a tree diagram.
2. Work out the probability that :
 - a. Mudlark will win tomorrow and it will rain.
 - b. Mudlark will win tomorrow.
 - c. It has rained, given that Mudlark has won.