A diagnostic test has a 98% probability of giving a positive result when applied to a person suffering from Thripshaw's Disease, and 10% probability of giving a (false) positive when applied to a non-sufferer. It is estimated that 0.5 % of the population are sufferers. Suppose that the test is now administered to a person whose disease status is unknown. Calculate the probability that the test will:

1. Be positive

0.5%\* 98%+99.5%\*10%=10.44%

1. Correctly diagnose a sufferer of Thripshaw's

=4.7%

1. Correctly identify a non-sufferer of Thripshaw's

=99.99%

1. Misclassify the person

0.5%\*2%+99.5%\*10%=9.96%