**Summary:**

<EFOFEX>
id:fxe{7f8f5e32-923b-41f9-aa71-9cbcba96b7c8}
FXGP:DP-5SPCLJP
FXData:

</EFOFEX>. Probability. False positives, false negatives. .

**Question:**

A fast, new saliva test has been developed that can detect whether a person has COVID 19. The test, however, is not perfect: only <EFOFEX>
id:fxe{80e9e3cb-6bd1-407d-a97e-e5d228c39800}
FXGP:DP-5SPCLJP
FXData:

</EFOFEX> of people with COVID 19 are detected by the test and <EFOFEX>
id:fxe{d3e22bbb-16dd-4267-bae2-483f9965611f}
FXGP:DP-5SPCLJP
FXData:

</EFOFEX> of people without COVID 19 will be falsely detected. It is believed that <EFOFEX>
id:fxe{93e68a16-6099-4d77-84ff-f80ab83c9731}
FXGP:DP-5SPCLJP
FXData:

</EFOFEX> of the target group has COVID 19.

1. What is the probability that a person tested at random will receive a positive test?
2. What proportion of the people who receive a **positive** test are actually infected with COVID 19?

The most dangerous results are false negatives, where someone who has COVID 19 is not detected by the test.

1. If <EFOFEX>
   id:fxe{9fd072a8-75a7-4780-9269-83e665a4c48b}
   FXGP:DP-5SPCLJP
   FXData:

   </EFOFEX> people from the target group are tested, how many people infected with COVID 19 should we expect to be missed.

**Solution:**

1. <EFOFEX>
   id:fxe{9aa015f7-eb38-446c-9e7e-1b30fa05e253}
   FXGP:DP-5SPCLJP
   FXData:

   </EFOFEX>
2. <EFOFEX>
   id:fxe{643333d1-f919-4b74-8b3d-43729988dff7}
   FXGP:DP-5SPCLJP
   FXData:

   </EFOFEX>
3. <EFOFEX>
   id:fxe{44967480-ce10-447d-82d7-e33cbbfaa66b}
   FXGP:DP-5SPCLJP
   FXData:

   </EFOFEX>