1. First 18 examples (training data) in contact_lenses:
   young, myope, no, reduced, none
   young, myope, no, normal, soft
   young, myope, yes, reduced, none
   young, myope, yes, normal, hard
   young, hypermetrope, no, reduced, none
   young, hypermetrope, no, normal, soft
   young, hypermetrope, yes, reduced, none
   young, hypermetrope, yes, normal, hard
   pre-presbyopic, myope, no, reduced, none
   pre-presbyopic, myope, no, normal, soft
   pre-presbyopic, myope, yes, reduced, none
   pre-presbyopic, myope, yes, normal, hard
   pre-presbyopic, hypermetrope, no, reduced, none
   pre-presbyopic, hypermetrope, no, normal, soft
   pre-presbyopic, hypermetrope, yes, reduced, none
   pre-presbyopic, hypermetrope, yes, normal, none
   presbyopic, myope, no, reduced, none
   presbyopic, myope, no, normal, none

The 19th example (test data) in contact_lenses:
   presbyopic, myope, yes, reduced, none

\[
p(\text{none} | \text{presbyopic, myope, yes, reduced}) \\
= p(\text{presbyopic, myope, yes, reduced} | \text{none})p(\text{none})/p(\text{presbyopic, myope, yes, reduced})
\]
\[
\propto p(\text{presbyopic, myope, yes, reduced} | \text{none})p(\text{none})
\]
\[
= p(\text{presbyopic} | \text{none})p(\text{myope} | \text{none})p(\text{yes} | \text{none})p(\text{reduced} | \text{none})p(\text{none})
\]
\[
= (2/11)*(6/11)*(5/11)*(9/11)*(11/18)
\]
\[
= 0.0225
\]

Note: \(A \propto B\) means \(A\) is proportional to \(B\).

Given \(p(\text{presbyopic, myope, yes, reduced})\) being a constant, we can therefore have
\[
p(\text{presbyopic, myope, yes, reduced} | \text{none})p(\text{none})/p(\text{presbyopic, myope, yes, reduced})
\]
\[
\propto p(\text{presbyopic, myope, yes, reduced} | \text{none})p(\text{none})
\]

Similarly,
\[
p(\text{soft} | \text{presbyopic, myope, yes, reduced}) = 0
\]
\[
p(\text{hard} | \text{presbyopic, myope, yes, reduced}) = 0
\]

The 19th example will be labelled as “none” by naïve Bayes.