Analyse the sample dataset given below and answer questions that follow.

**Sample Dataset**

Colour Size Texture Weight Apple

Red Small Smooth Light Yes

Green Large Rough Heavy No

Red Large Smooth Heavy Yes

Green Small Rough Light No

Red Small Rough Light Yes

Green Large Smooth Heavy No

Red Large Rough Heavy Yes

Green Small Smooth Light No

Red Small Smooth Heavy Yes

Green Large Rough Light No

* Determine whether a new object with the following features is an apple. Show all the steps that made you to arrive to the final answer:

**Colour: Red**

**Size: Small**

**Texture: Rough**

**Weight: Light**

**NAÏVE BAYES ALGORITHM**

**Step:1**

P(Yes) = Number of Yes / Total instances

= 5 / 10

P(No) = Number of No / Total instances

= 5 / 10

**Step:2**

P (colour=red/ apple=yes) = 5/5 = 1

P (size= small/ apple=yes) = 3/5 = 0,6

P(Texture=Rough/apple=yes) = 2/5= 0,4

P(Weight=light/apple=yes) = 2/5=0,4

Link: