**ST MARY'S NEWHOPE NABWERU**

**S.2 PHYSICS ASSESSMENT**

**Time: 1 hours anf 30 mins**

**Instructions:**

**Attempt all items**

**ITEM ONE**

Mr. Juma wants to open up a small business salon for his wife,however he has limited capital to start this business,when he went for guidance of what he should buy from the technician who is going to arrange ,organize and install the saloon ,the technician told him that he had to buy **three** large **plane mirrors** among other requirements however the cost of the four plane mirrors is high and Mr. Juma is wondering why he can not buy at least two.

**TASK**

**a)** Explain to Mr. Juma why you think the technician told him to buy not less than three plane mirrors

b) the nature( characteristics) of images formed by a plane mirrors and other areas where he can **use** the plane mirrors

**Item two**

An astronaut weighed the weight of **un calibrated thermometer on earth** and found out that it was 5N. He then went to the moon and measured the weight of the same thermometer and found out that it had reduced to 1.667N . The thermometer also had **alcohol** as a liquid in its bore but the astronaut decided to remove the **alcohol and filled the thermometer with mercury.**

**Task**

As a physics student explain;

a) the astronaut can calibrate the thermometer

b) why the astronaut preferred to use **mercury to alcohol as a liquid** in the thermometer

c) i) why the weight of the thermometer at the earth was different from that of the moon

ii) differences between **MASS** and **WEIGHT** of a substance