11.7 – Images in a Plane Mirror

We use our laws of reflection to predict where our images will be. Read section 11.7 for detailed explanation and useful diagrams.

Important notes:

1) Our eye 'understands' that light travels in a straight line so when reflected light reaches our eye, our optic centre in our brain extends the reflected ray backwards and assumes the light came from that point. That's why we extend back the reflected ray.

2) Imaginery lines are dashed. So when you extend the reflected ray back behind the mirror, it is dashed. Light does not go through a mirror. Normal lines are imaginary too and are represented by dashed lines.

3) For any given spot, we need to look at least 2 reflected rays. When we extend these reflected rays behind the mirror, where they <u>meet</u> is where our eye sees the image.

4) We choose useful spots on our object to find the image. Usually the top and bottom of the object is helpful. Ray model of light → we can't draw all the millions of light rays coming from an object, nor would be want to. We choose a few rays that are useful to us.

There is a lesson in which it is very helpful to be in class. If you were absent, please see me for some extra help.

Image Characteristics …aka….SALT characteristics

S – Size – compare the size of the image to the size of the object **(images are bigger, smaller or same)**

A – Attitude – compare orientation of the image to object **(upside down or right side up)**

L – Location – where is the image? Compare to the object. Is image in front of the mirror/lens like the object or is it behind the lens? **(in front or behind).**
object is always considered in front of the mirror/lens.

T – Type – Can you 'catch' the image on a screen (piece of paper). (**real or virtual)**
Yes? Then it's a real image
No? Then it's a virtual image.