Name: _____ Date: _____

Light

Q1. How many images of an object will be formed when two plane mirrors are set at an angle of 45°, 60°, 120° and 180°.

Ans. _____

_____

_____

_____

_____

_____

Q2. How does eye adjust itself to deal with light of varying intensity?

Ans. _____

_____

_____

_____

_____

_____

Q3. Explain why, an owl can see well in the night but not during the day whereas an eagle can see well during day but not in the night.

Ans. _____

_____

_____

_____

_____

Education with Fun

Light

Q1. How many images of an object will be formed when two plane mirrors are set at an angle of 45°, 60°, 120° and 180°.

Ans. The formula to calculate the no. of images of an object placed between 2 plane mirrors is (360°/x°)−1; where 'x' is the angle of inclination.

45° - No. of images formed = (360°/45°)-1= 8-1 =7

60° - No. of images formed = (360°/60°)-1= 6-1 =5

120° - No. of images formed = (360°/120°)-1= 3-1 =2

180° - No. of images formed = (360°/180°)-1= 2-1 =1

Q2. How does eye adjust itself to deal with light of varying intensity?

Ans. The iris controls the amount of light entering into the eye by automatically adjusting the size of the pupil according to the intensity of the light that the eye receives. If the amount of light is high, the iris contracts the pupil and reduces the amount of light entering the eyes. If the amount of light is less, the iris expands the pupil so that more light can enter the eye and the things can be viewed clearly.

Q3. Explain why, an owl can see well in the night but not during the day whereas an eagle can see well during day but not in the night.

Ans. A night bird (owl) can see very well in the night but not during the day. On the other hand, day light birds (kite, eagle) can see well during the day but not in the night. The Owl has a large cornea and a large pupil to allow more light in its eye. Also, it has on its retina a large number of rods and only a few cones. The day birds on the other hand, have more cones and fewer rods.