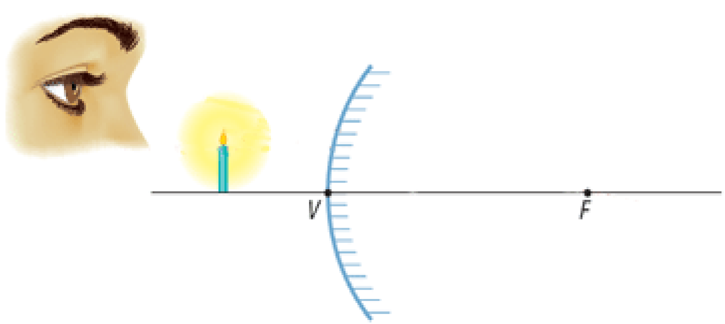
Review: Mirrors

1. Why is the fact that light travels in a straight line critical to the technique of ray tracing?
2. State the characteristics of an image.
3. There is a special incident ray that reflects back on itself. How would you aim this incident ray to achieve this effect? What is the angle of incidence of this incident ray?
4. What information does the sign (+ or —) of the image distance give you?
5. Explain the difference between a real image and a virtual image.
6. Using a sketch, show how you would draw a ray diagram for a converging mirror.
7. Why is the value of the focal length of a diverging, (convex mirror), negative?
8. How is an image in a plane mirror different from an image in a converging mirror?
9. How could you find F, the focus of a converging mirror?
10. How are the rules for locating an image in a diverging mirror different from those for a converging mirror ?
11. Sometimes, when you sit by a lake in a forest, you can see a perfect image of the surroundings. Other times, whilst sitting be the same lake, no image in the water is visible. Explain the difference between the two situations.
12. Diverging mirrors are often used as security mirrors in convenience stores. Explain why.
13. In the case of converging mirrors it was possible to consider 3 different cases, (beyond C, between F and C, and between F and vertex), why would it not be possible to consider three similar cases for a diverging mirror ?
14. Draw the image that would result from this reflection in a diverging mirror.



15. What kind of light does this diagram show? How does it work?