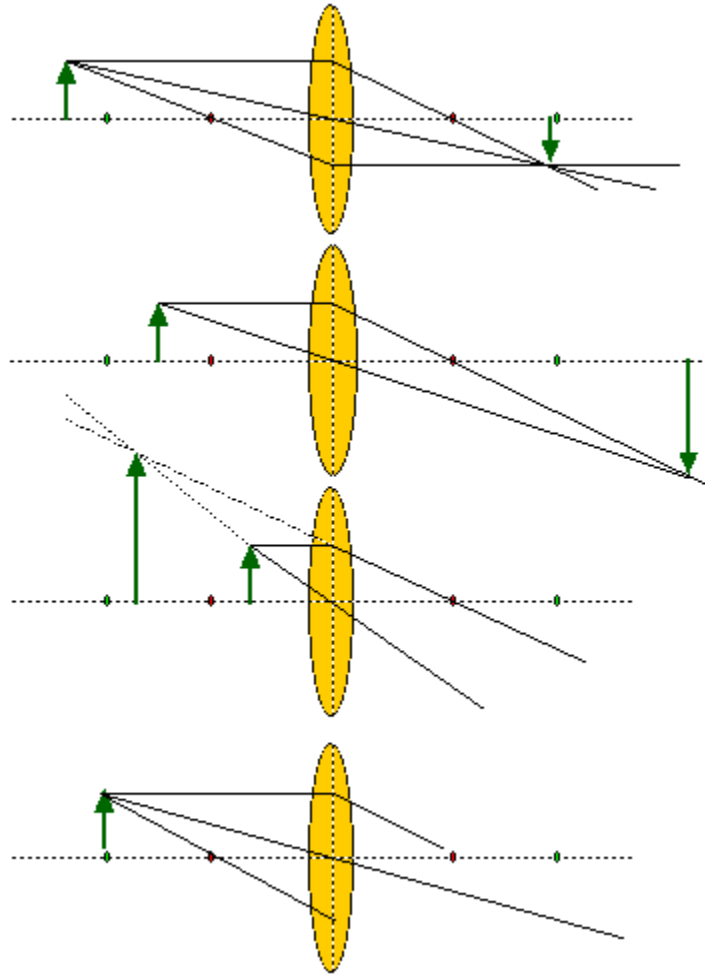


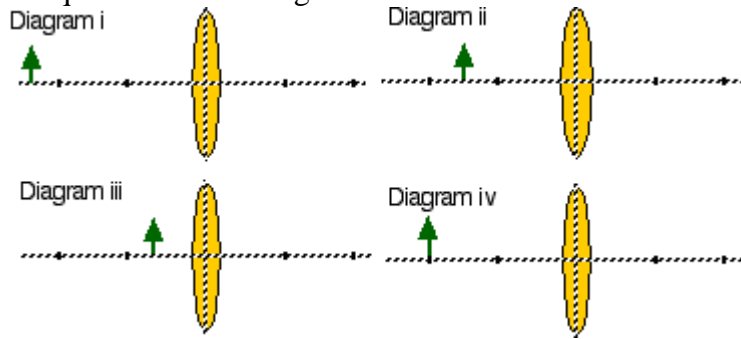
1. Which situation involving object placement in front of a converging lens is NOT shown in at least one of the diagrams? (Not all diagrams have all rays drawn)



- a) The object is between the focus and the lens, producing a magnified image.
- b) The object is beyond the lens' centre of curvature.
- c) The image is real, inverted and smaller than the object.
- d) The object is on the lens' centre of curvature which produces a real, inverted image.
- e) The object is on the lens' focus, so no image is formed.

### Practice Ph11 4-3

2. In all four diagrams, the object is 5 cm high. Which set ups will produce a real, inverted image that is greater than or equal to 5 cm in height.



- Diagram iv
  - Diagram i
  - Diagram ii
  - Diagram iii
  - Diagrams ii and iv
3. Select *all that apply*. Marks are subtracted for incorrect answers...

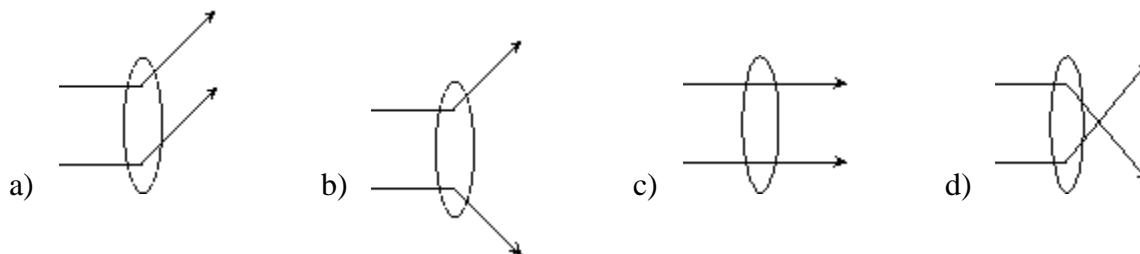
During an experiment you will be working with a **real** image when:

- an object is placed inside the focus of a converging lens
  - an object is placed outside the focus of a converging lens
  - the image can only be viewed on a screen
  - the image can only be seen by placing your eye in the path of the light
  - the object is placed outside the focus of a diverging lens
4. Select *all that apply*. Marks are subtracted for incorrect answers...

During an experiment you will be working with a **virtual** image when:

- an object is placed inside the focus of a converging lens
  - an object is placed outside the focus of a converging lens
  - the image can only be viewed on a screen
  - the image can only be seen by placing your eye in the path of the light
  - the object is placed outside the focus of a diverging lens
5. A Florence flask filled with water behaves like a...
- convex mirror.
  - concave lens.
  - convex mirror.
  - convex lens.

6. Which diagram below BEST shows what happens when light hits a camera lens?



### Practice Ph11 4-3

7. The image of a distant object made by a convex lens is:
  - a) smaller than the object
  - b) larger than the object
  - c) the same size as the object
  - d) can be any of the above, depending on how distant the object is.
8. What sort of image do you see when you look through a hand magnifying glass?
  - a) real and right side up
  - b) real and enlarged
  - c) virtual and upside down
  - d) virtual and right side up
9. Which optical instrument produces a magnified, virtual, and inverted image of small objects?
  - a) A pair of binoculars
  - b) A refracting telescope
  - c) A single lens reflex camera
  - d) A microscope
10. What happens to a path of a light ray parallel to the principal axis, after it passes through a converging lens?
  - a) It passes through the 2F position on the other side of the lens.
  - b) It remains parallel to the principal axis.
  - c) It is reflected and passes through the focus on the same side of the lens.
  - d) It passes through focus on the other side of the lens.
11. What is the magnification of a convex lens which produces a 5 cm high image from a 1cm tall object when the object distance is 10 cm?
  - a) 0.2 times
  - b) 50 times
  - c) 2 times
  - d) 5 times
12. A pencil 10 cm long is placed 100 cm in front of a convex lens of focal length 50 cm. The image is
  - a) 5 cm long and upright
  - b) 10 cm long and inverted
  - c) 5 cm long and inverted
  - d) 10 cm long and upright