Given two identical lenses, \( f_1 = f_2 = f \). The object is located at a distance \( p_1 = 2f \) from lens \#1. The separation is \( d = 5f \).

Based on the ray diagram determine the property of the image formed by the two lens system.

A) The image is upright and real.
B) The image is upright and virtual.
C) The image is inverted and real.
D) The image is inverted and virtual.

We indicate the situation qualitatively, and leave the construction of an accurate diagram to the reader. The image formed by lens \#1 is inverted and real. It becomes the object of \#2. The image formed by \#2 is again real and inverted. Put all together, the final image is upright and real.

Answer A.

36.04-03‘Two‘Lens‘Problem 2004-3-24