Answer on Question #42020 - Physics - Acoustics

Question:A concave mirror of focal length 'f1' is placed at a distance of 'd' from a convex lens of focal length 'f2'. A beam of light coming from infinity and falling on this convex lens-concave mirror combination returns to infinity. The distance 'd' must equal : (1) 2f1 + f2 (2) 2f1 + f2 (3) f1 + f2 (4) f1 + f2

Solution. We want the focuses of mirror and lens to coinside, hence, correct answer is (3) f1+f2.