

Sketch the ambient, diffuse, specular, and total illumination for the following scene as function of  $x$ . Assume the Phong illumination model, i.e.,  $I = k_a I_a + k_d I_d (N \cdot L) + k_s I_s (R \cdot V)^n$ , where  $k_a = 0.3$ ,  $k_d = 0.7$ ,  $k_s = 0.7$ ,  $I_a = I_d = I_s = 1.0$ ,  $n = 100$ .

