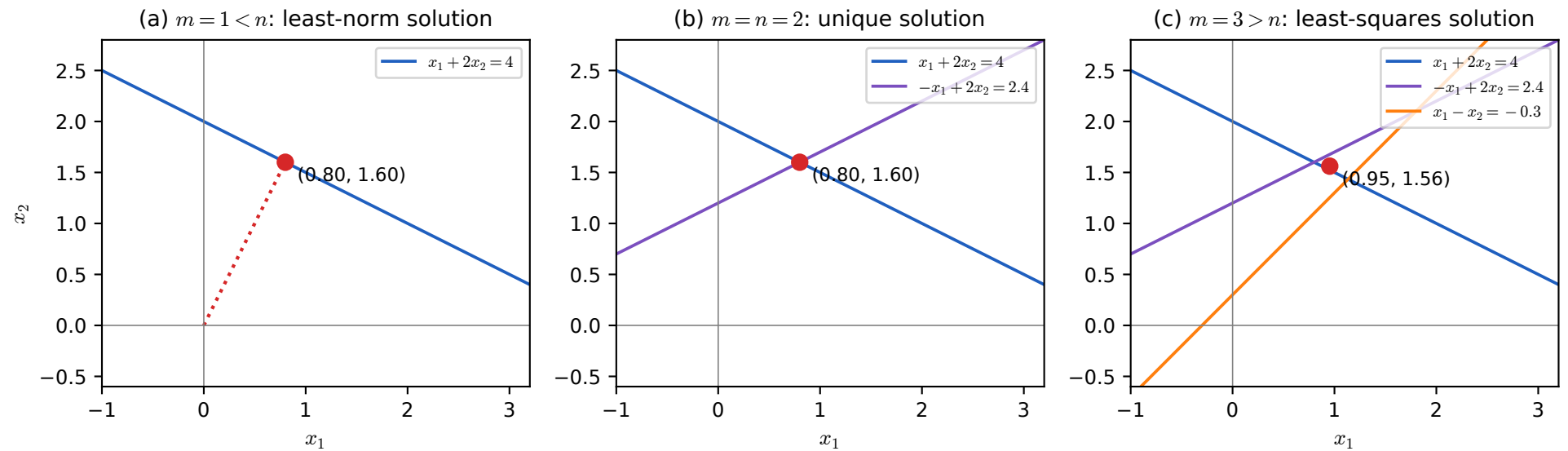

(a) $m = 1 < n$: least-norm solution
$x_1 + 2x_2 = 4$
(0.80, 1.60)
x_1
x_2
(b) $m = n = 2$: unique solution
$x_1 + 2x_2 = 4$
$-x_1 + 2x_2 = 2.4$
(0.80, 1.60)
x_1
(c) $m = 3 > n$: least-squares solution
$x_1 + 2x_2 = 4$
$-x_1 + 2x_2 = 2.4$
$x_1 - x_2 = -0.3$
(0.95, 1.56)
x_1