Solutions to exercises in Section 3.8: #47, #48, #49, #50.

#47. False. For instance, when \( p(x) = q(x) = x \), we know that \( f(x) = x/x \) has no zero while \( p(x) \) has a zero at \( x = 0 \).

#48. True.

#49. True.

#50. True.