The revenue derived from the production of *x* units of a particular commodity is million dollars. What level of production results in maximum revenue? What is the maximum revenue?

1. a. Maximum at *x* = 8 and maximum revenue is *R*(8) = 32 (million dollars)
2. b. Maximum at *x* = 8 and maximum revenue is *R*(8) = 2.67 (thousand dollars)
3. c. Maximum at *x* = 8 and maximum revenue is *R*(8) = 4 (million dollars)
4. d. Maximum at *x* = 9 and maximum revenue is *R*(9) = 2.67 (million dollars)

Determine the critical points of the given function and classify each critical point as a relative maximum, a relative minimum, or neither. 

1. a. (4.5, –32) relative maximum; *x* = 5 neither; *x* = 4 neither,
2. b. (4.5, –32) relative minimum; (5, 8) relative maximum; (4, 8) relative maximum;
3. c. (5, 8) relative maximum; (4, 8) relative maximum
4. d. (5, 8) relative minimum; (4, 8) relative maximum