Quiz 11 Key — MA16010 — November 3, 2017

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Min	Mean	Max
1	3.3	5

1. (a) (1 point) Write a formula for the distance from any point (x, y) to the point $(2, 2)$.

   (b) (1 point) The point (x, y) is on the parabola $y = 16 - 4x^2$. Use this information to write your formula from part (a) in terms of only x.

   You DO NOT need to maximize or minimize the distance. You do not need to simplify. Just write the formulas.

   (a) $\sqrt{(x-2)^2 + (y-2)^2}$

   (b) $\sqrt{(x-2)^2 + (16 - 4x^2 - 2)^2}$

2. (3 points) A newspaper costs \$0.50 to print per copy. If it is sold at a price of p dollars, then it will sell $(2000 - 10p)$ copies. Write formulas (which depend only on p) for the profit AND for the revenue made selling newspapers.

   You DO NOT need to maximize the profit nor revenue. Just give the formulas.

   profit=$(2000 - 10p)(p - 0.5)$, revenue=$(2000 - 10p)p$