MATH 111 – EXAM II Hints and Answers
Winter 2015

Version 1: In #1, $TR(q) = 36.4q$.

1. (4 points each)
   (a) 23.12 hundred dollars
   (b) $MC(q) = 4q + 10.02$
   (c) $q = 0.4, 80$ hundred Hangups
2. (a) (4 points) $4x + 4y \leq 40$, $3x + 9y \leq 54$, $x \geq 0$, $y \geq 0$
   (b) (2 points) $P(x, y) = 40000x + 60000y$
   (c) (6 points) Vertices: $(0, 0)$, $(0, 6)$, $(10, 0)$, $(6, 4)$
   (d) (2 points) \$480,000
3. (6 points each)
   (a) $p = 2.7q + 6$
   (b) $(30, 87)$
4. (6 points each)
   (a) from $t = 11.47$ to $t = 23$ minutes
   (b) $t = 1.26$ minutes

Version 2: In #1, $TR(q) = 38.6q$.

1. (4 points each)
   (a) 11.62 hundred dollars
   (b) $MC(q) = 4q + 15.02$
   (c) $q = 0.25, 116$ hundred Hangups
2. (a) (4 points) $4x + 8y \leq 48$, $3x + 2y \leq 24$, $x \geq 0$, $y \geq 0$
   (b) (2 points) $P(x, y) = 50000x + 80000y$
   (c) (6 points) Vertices: $(0, 0)$, $(0, 6)$, $(8, 0)$, $(6, 3)$
   (d) (2 points) \$540,000
3. (6 points each)
   (a) $p = 0.2q + 4$
   (b) $(140, 32)$
4. (6 points each)
   (a) from $t = 14.85$ to $t = 31.5$ minutes
   (b) $t = 0.63$ minutes