

Math 111 - Autumn 2005
Mid-Term Exam Number One
October 20, 2005
Answers

Version 1 (problem 1 (a) involves solving a pair of equations)

1. (a) $x = -94/17, y = -39/17$
(b) $x = \frac{-8 \pm \sqrt{32}}{2}$
(c) $(2/3, 19/3)$
2. (a) $q \approx 930$ (more than one answer possible)
(b) \$12
(c) \$14,300
(d) $q \approx 460$
3. (a) 3.875 mph
(b) 2.75 mph
(c) from $t = 1$ to $t = 2.25$ (many answers possible)
(d) after Boris has been walking for 1.6 hours
4. (a) \$52
(b) \$11550
(c) $q \approx 940$

Version 2 (problem 1 (a) involves solving a single quadratic equation)

1. (a) $x = \frac{-9 \pm \sqrt{69}}{2}$
(b) $x = -94/17, y = -39/17$
(c) $(7/4, 39/8)$
2. (a) \$33.3
(b) $q \approx 125$
(c) \$14,300
(d) $q \approx 350$
3. (a) 2.8 mph
(b) 2.75 mph
(c) from $t = 1$ to $t = 2.5$ (many answers possible)
(d) after Boris has been walking for 0.85 hours
4. (a) \$52
(b) \$38870
(c) $q \approx 980$