

**MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 4 - JANUARY 2013
ROUND 4 ALG 2: QUADRATIC EQUATIONS**

ANSWERS

A) _____

B) _____

C) _____

- A) Find all positive real numbers with the property that “six times the reciprocal of the number exceeds the number by 5”.

- B) Solve for x .

$$\frac{x+2}{x-1} - 3 = 18 \left(\frac{x-1}{x+2} \right)$$

- C) The difference between the square of a two-digit natural number and the square of the sum of its digits is 2655.
Compute this unique natural number.