

MASSACHUSETTS MATHEMATICS LEAGUE

JANUARY 2005

ROUND 6 ALGEBRA ONE: ANYTHING

ANSWERS

A) \_\_\_\_\_

B) \_\_\_\_\_

C) \_\_\_\_\_

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A) If  $x = z^2 + z$  and  $y = z^3 + z^2$  and  $x = 2$ , find all possible values for  $y$ .

B) If the line passing through  $(2, c)$  and  $(4, 5c)$  has slope  $-0.5$  find the line's equation in  $y=mx+b$  form.

C) Sue and her Uncle Joe share the same birthday of January 1. Today (1/6/2005) Joe noticed that three years ago he was three times Sue's age but in 1996 he was seven times Sue's age! In what year will Sue be half Joe's age?