

**MASSACHUSETTS MATHEMATICS LEAGUE
MARCH 2006**

ROUND 4 ALGEBRA ONE: ANYTHING

ANSWERS

A) _____

B) _____

C) _____

- A) Find the sum of the 4 numbers that form the coordinates for the intercepts of the line

$$20x + 30y = 24,072$$

- B) A company makes school sweatshirts and sweatpants. Five sweatshirts and six sweatpants cost a total of \$147. For orders totaling more than 30 items, the company reduced by 40% the price of sweatshirts and cuts the price of sweatpants in half. Forty sweatshirts and forty sweatpants, therefore, cost a total of \$578. Find the original cost of a single pair of sweatpants.

- C) If $|x - a| = a + 2$, $x > 0$ and $a \leq 668$, find the maximum possible value of $x + a$.