

**MASSACHUSETTS MATHEMATICS LEAGUE**  
**CONTEST 5 – FEBRUARY 2007**  
**ROUND 4 ALG 1: WORD PROBLEMS**

**ANSWERS**

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

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

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

- A) Express Scripts uses three types of bottles to ship pills to their customers. Bottle  $A$  holds 12 fewer pills than bottle  $B$ . Bottle  $C$  holds twice as many pills as bottle  $A$ . If 2  $A$  bottles, 4  $B$  bottles and 3  $C$  bottles hold 240 pills. How many pills does an  $A$  bottle hold?
- B) The first book in a trilogy by Anne McCaffrey contains 67 more pages of text than the second, while the third contains 24 fewer pages of text than the second. The total number of pages of text in the trilogy is 751 pages. If all the chapters in the first book contain exactly  $P$  pages of text, where  $P > 1$ , what is the maximum number of chapters possible in the first book?
- C) Of the 585 girls at Northeast Statistics High School last year, 170 played fall sports, 165 played winter sports and 150 played spring sports. Twenty two girls played sports in all three seasons, while 80 played only in the fall, 84 played only in the winter, and 71 played only in the spring. How many girls did not play sports in any of the three seasons?