

**MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 2 - NOVEMBER 2012
ROUND 2 ALGEBRA 1: ANYTHING**

ANSWERS

A) _____ lbs

B) _____

C) None 1 2 3 4

A) My current weight this morning is 195 lbs.

If I were to gain 10 lbs, I would be 5 lbs over my ideal weight W .

If instead I were to lose x lbs, I would be 9 lbs under my ideal weight W .

How much will I weigh tomorrow, if I gain x lbs today?

B) Given: x and y are integers for which $\begin{cases} x + y = 17 \\ xy > 42 \end{cases}$.

What is the maximum possible value of $16x + y$?

C) My book report contains 6 double-sided pages consecutively numbered 1 to 12.

(For example, pages 3 and 4 are printed on opposite sides of the same sheet.)

On my way to class, my report was swept away by a strong gust of wind.

I was only able to find three of the sheets.

Circle "None" or the number(s) of all the statements which must be true.

- 1) The sum of the page numbers on the lost sheets could be 24
- 2) The sum of the page numbers on the lost sheets could be 49
- 3) The sum of the page numbers on the lost sheets must be at least 21 and at most 57.
- 4) The sum of the page numbers on the sheets I found could equal the sum of the page numbers on the lost sheets.