

**MASSACHUSETTS MATHEMATICS LEAGUE
OCTOBER 2005
ROUND 3 ALG 1: LINEAR EQUATIONS**

ANSWERS

A) _____

B) _____ mph

C) _____

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- A) If $[r]$ represents the largest integer which is less than or equal to r and

$$\frac{x+2}{9} - \frac{x-1}{16} = 1 \quad \text{find} \quad [x]$$

- B) I took 6 hours to reach my destination. After averaging 60 mph for the first 2.5 hours, bad weather forced me to reduce my speed for the remainder of the trip. If my overall average speed was 39 mph, what was my average speed for the second part of my trip?

- C) Suppose for all x , $3Ax - ABx + 15 - 5B = 13(4x + 5)$ with A and B real numbers. Find the value of $A+B$.