

MASSACHUSETTS MATHEMATICS LEAGUE
NOVEMBER 2003
ROUND 2: ALGEBRA I ANYTHING

ANSWERS

A) _____

B) _____

C) _____

A) Sharnell could earn a weekly salary of \$200 plus 15% commission of sales at the Radio Barn, or she could earn \$300 plus 10% commission on sales at Woofen Etc store. Compute the dollar amount of sales Sharnell would have to sell to generate the same salary at each business.

B) Solve for x: $\frac{3}{x-1} - \frac{14}{x^2} = \frac{6}{x^3 - x^2}$.

C) If the graph of $\{(x, y): y = ab^x\}$ contains the points $(0, 3)$ and $(3, 24)$; compute the value of $a + b$.