

MASSACHUSETTS MATHEMATICS LEAGUE
MARCH 2005
ROUND 6: ALGEBRA 2 PROBABILITY & BINOMIAL THEOREM
ANSWERS

A) _____

B) _____

C) _____

- A) In the Junior class of 210 students 20 students were in the fall play and 28 were in the spring musical. If 12 students were in both events what is the probability that a Junior selected at random was in neither the fall play nor the spring musical? Express your answer as a simplified fraction.
- B) A triangle is formed using the vertices of the octagon CREATION. What is the probability that the triangle's name contains at least one consonant? Express your answer as a simplified fraction
- C) Consider the expansion of $\left(x + \frac{1}{2x}\right)^{2005}$. Divide the coefficient of the x^3 term by the coefficient of the x term and express the answer as a simplified fraction.