

**MASSACHUSETTS MATHEMATICS LEAGUE
OCTOBER 2004
ROUND 6 ALG 1: EVALUATIONS**

ANSWERS

A) _____

B) _____

C) _____

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- A) Consider the expression $2 * 120 / 5 * 3$ where $*$ means multiply and $/$ means divide. If A is the value of the expression using normal order of operations, and B is its value if division always takes precedence over multiplication, and C is its value if multiplication always takes precedence over division, evaluate $A - B + C$.

- B) If $x \oplus y$ means x^y and $x \Psi y$ means $\sqrt[y]{x}$ find $[(4 \oplus 4) \Psi 2] \oplus 3$

- C) If $\sqrt{x} + \sqrt{y} = 17$ and $x - y = 51$ find $x + y$