MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 1 - OCTOBER 2006
ROUND 6 ALG 1: EVALUATIONS

ANSWERS

A) _____

B) _____ %

C) _____

A) Consider the following binary operation: a ♣ b = $2a(3 - b)$.
Determine the positive difference between (0.5) ♣ 4 and 4 ♣ (0.5).

B) What is percent error (to the nearest 0.1%) when $0.\overline{42}$ is approximated as $\dfrac{2}{5}$?

C) *H* denotes Jack's house and *P* the local playground. If Jack walks only east or south, how many different routes can he take from his house to the playground?
Note: *SSSEEEE* represents one such route traveling along the left side and then the bottom side of the rectangle.