Student Mathematics League

Questions for Week of Oct. 1

Student Name: _____ Math Instructor: _____

CWID#: _____ Phone #: _____

Submit you entries to Bobby Jackson in Alexander 210. **Deadline for submissions is 1 p.m. Friday**, **October 5**. One randomly selected student from the highest scoring submissions will receive a cash prize of $25. Score will be determined as follows:

+2 points for each correct response

-1/2 point for each incorrect response

0 points for no response

Clearly circle your answer in each case.

1. Find the area of the figure in the first quadrant bounded by $y - 2x = 1$, $y - 4x = 1$, and $x = 3$.

A. 6 B. 9 C. 12 D. 15 E. 18

2. Sue has 40 dimes, nickels, and quarters worth $5.90. If the quarters were dimes, the dimes were nickels, and the nickels were quarters, the coins would be worth $5.45. How many nickels does Sue have?

A. 9 B. 11 C. 13 D. 15 E. 17

3. Six children, three boys and three girls, are randomly seated in six chairs in a row. The probability that no children of the same gender are seated next to each other is

A. $\frac{1}{10}$ B. $\frac{1}{5}$ C. $\frac{3}{10}$ D. $\frac{2}{5}$ E. $\frac{1}{2}$

4. Two goats are tied to opposite ends of a straight 50-ft long fence by ropes of length 40 ft and 30 ft. What is the area (to the nearest 5 ft) of the region which they both can reach?

A. 320 B. 330 C. 345 D. 650 E. 665

5. The volumes of two cubes differ by 259 cm^3. If the edges of one cube are each 4 cm greater than the edges of the other, then the sum of the lengths of one edge of each cube equals

A. 7 cm B. 8 cm C. 9 cm D. 10 cm E. 11 cm