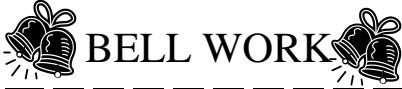# SOLVING SYSTEMS OF EQUATIONS BY MATRICES – Day 2

🔔 BELL WORK 🔔

1. What is the rate of change of the function y = -7?

A. 7   C. 0

B. -7   D. Undefined

2. Find the value of *m* in the following equation: 2m + 1 = 3m + 4(m – 1)

A. m = -$\frac{3}{5}$ C. m = $\frac{2}{9}$

B. m = 0   D. m = 1

Set up a system of equations, but do not solve.

Example 1: 8 pens and 7 markers cost $3.37, while 5 pens and 11 markers cost $3.10. Find the cost of each pen and each marker.

Define variables: Equation: _____

                                               Equation: _____

Example 2: The length of a rectangular field is 12 feet longer than it is wide. The perimeter is 76 feet. Find the length of the field.

Define variables: Equation: _____

                                               Equation: _____

Write a system of equations, and solve using matrices in your calculator.

Example 3: A caterer's total cost for catering a party includes a fixed cost, which is the same for every party. In addition the caterer charges a certain amount for each guest. If it costs $300 to serve 25 guests and $420 to serve 40 guests, find the cost per guest.

Define variables:

Equation: _____

Equation: _____

Solution:_____

Example 4: Jack has $3 in nickels and dimes. He has twice as many nickels as he does dimes. How many nickels and how many dimes does he have?

Define variables:

Equation: _____

Equation: _____

Solution:_____