

Systems of Equations

This review is NOT MANDATORY and will not be collected. You should use it if you are struggling on the Bonus Assignment #1 (Questions: 42-49)
NON-CALCULATOR

Solve each system by graphing.

$$1) \begin{cases} y = \frac{3}{4}x - 1 \\ y = -\frac{1}{2}x + 4 \end{cases}$$

$$2) \begin{cases} y = 2x - 2 \\ y = -4 \end{cases}$$

Solve each system by substitution.

$$3) \begin{cases} 7x - 7y = 14 \\ y = 2x - 5 \end{cases}$$

$$4) \begin{cases} -x - 6y = -22 \\ -x + y = -1 \end{cases}$$

Solve each system by elimination.

$$5) \begin{cases} -10x + 9y = 24 \\ 10x - 3y = 12 \end{cases}$$

$$6) \begin{cases} 5x + 8y = 30 \\ 5x - 3y = -25 \end{cases}$$

7) $-9x - 9y = 9$
 $10x - 3y = -10$

8) $-4x + 5y = -26$
 $-7x - 2y = 19$

9) Matt and Huong each improved their yards by planting hostas and ornamental grass. They bought their supplies from the same store. Matt spent \$46 on 4 hostas and 2 bunches of ornamental grass. Huong spent \$122 on 8 hostas and 10 bunches of ornamental grass. What is the cost of one hosta and the cost of one bunch of ornamental grass?

10) The county fair is a popular field trip destination. This year the senior class at High School A and the senior class at High School B both planned trips there. The senior class at High School A rented and filled 6 vans and 2 buses with 168 students. High School B rented and filled 6 vans and 9 buses with 462 students. Every van had the same number of students in it as did the buses. How many students can a van carry? How many students can a bus carry?

Answers to Systems of Equations (ID: 1)

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|---|---------------|----------------------|---------------|
| 1) $(4, 2)$ | 2) $(-1, -4)$ | 3) $(3, 1)$ | 4) $(4, 3)$ |
| 5) $(3, 6)$ | 6) $(-2, 5)$ | 7) $(-1, 0)$ | 8) $(-1, -6)$ |
| 9) hosta: \$9, bunch of ornamental grass: \$5 | | 10) Van: 14, Bus: 42 | |