

**Systems of Linear Equations – NYS Questions**

**Name:** \_\_\_\_\_

**Project - Due Thursday, 01/16/20**

**Date:** \_\_\_\_\_ **Period:** \_\_\_\_\_

**20 Point - Classwork Grade**

**P 1.**

A school district transported a total of 409 students and teachers to a zoo in buses and vans.

- Each bus transported a total of 55 students and teachers.
- Each van transported a total of 12 students and teachers.
- There were 5 more buses than vans.

What is the total number of students and teachers who rode to the zoo in buses?

What is the total number of students and teachers who rode to the zoo in vans?

***Show your work.***

***Answer*** \_\_\_\_\_ students and teachers rode in buses

\_\_\_\_\_ students and teachers rode in vans

**P 2.**

Determine the solution, if any, to the system of equations below.

$$8x - 2y = 1$$

$$-4x + y = 3$$

*Show your work.*

**P 3.**

Oliver works at a bookstore. He packed 20 identical paperbacks and 9 identical textbooks in a box. The total mass of the books was 44.4 pounds. After he put 1 more textbook and 5 more paperbacks in the box, the total mass of the books was 51 pounds.

Write a system of equations that can be used to determine  $p$ , the mass, in pounds, of one paperback, and  $t$ , the mass, in pounds, of one textbook.

**Answer**

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Solve the system of equations to find the two masses.

**Show your work.**

**Mass of one paperback** \_\_\_\_\_ pound(s)

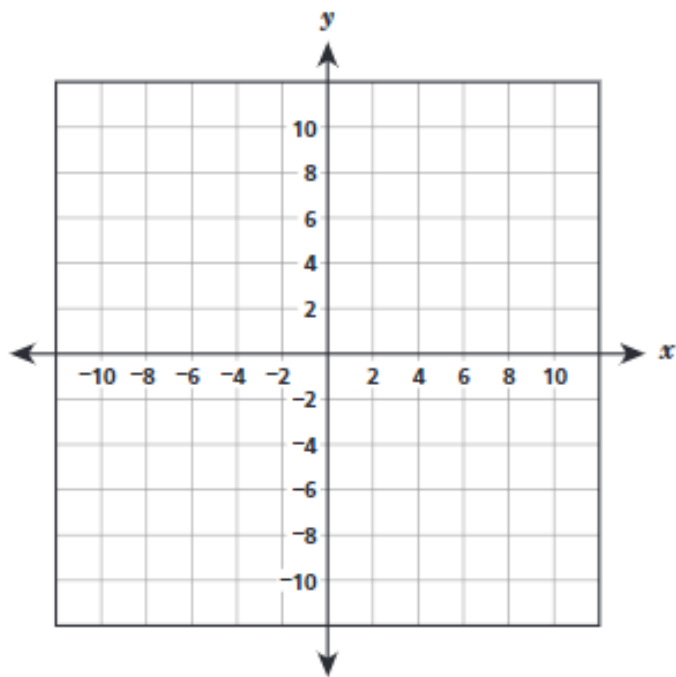
**Mass of one textbook** \_\_\_\_\_ pound(s)

P 4.

Graph and label the given system of equations on the coordinate grid shown below.

$$y = \frac{1}{2}x + 2$$

$$y = x - 1$$



What is the solution to the system of equations?

**Answer** \_\_\_\_\_