

GMP I into II Summer Homework

- Part I of this homework is a large first homework assignment of GMP II and should be done closer to the beginning of the school year. Part II is review and will count toward your GMP II first quarter grade as a quiz. The problems will be checked for effort on the first day of class and clean ups will be assigned afterward.
- **This is not meant to be done in one sitting.** Plan ahead and pace yourself so that you are doing only a few problems at a time. You will get much more out of it this way.
- Show all work on lined papers. Problems will not be graded based on the answers, but **rather based on the work shown or explanation.** If there is no work shown, you will not earn credit for a problem.

Part I: Homework in the yellow book, "Mathematics 1"

p. 30 (1, 5, 6, 7, 9, 12)

p. 31 (2, 9, 10, 11)

Part II: Review Quiz

1. Show or explain why the expressions $3(y - 2) + 2(y - 2)$ and $5(y - 2)$ are equivalent?

2. Solve these equations:

a. $\frac{1}{4}(x - 2) = 3x - 5$

b. $2(x + 3) - (x - 5) = 3x + 1$

3. Nia and Trey both had a sore throat so their mom told them to gargle with warm salt water.

Nia mixed 1 teaspoon salt with 3 cups water.

Trey mixed $\frac{1}{2}$ teaspoon salt with $1\frac{1}{2}$ cups of water.

Nia tasted Trey's salt water. She said,

"I added more salt so I expected that mine would be more salty, but they taste the same."

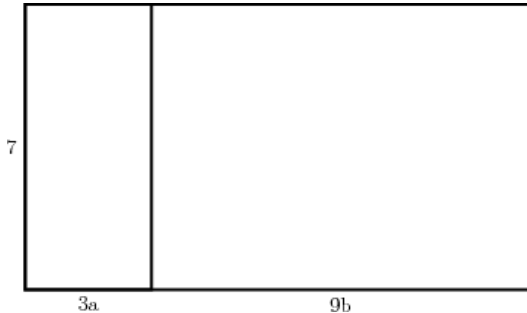
a. Explain why the salt water mixtures taste the same.

b. Find an equation that relates s , the number of teaspoons of salt, with w , the number of cups of water, for both of these mixtures.

c. Draw the graph of your equation from part b.

d. Your graph in part c should be a line. Interpret the slope as a unit rate.

4. Use 2 methods to find the area of the rectangle below.



5. Jack bought 3 slices of cheese pizza and 4 slices of mushroom pizza for a total cost of \$12.50. Grace bought 3 slices of cheese pizza and 2 slices of mushroom pizza for a total cost of \$8.50. What is the cost of one slice of mushroom pizza?

6. Combine over a common denominator

a. $\frac{1}{b} + \frac{2}{b}$

b. $\frac{3}{b} - \frac{8}{3b}$

c. $\frac{3}{b} + \frac{4}{b+1}$

7. Which expression is not equivalent to the other three? Justify your reasoning.

$$-8 - 7n + 16n$$

$$9(n - 8)$$

$$n - 8 + 8n$$

$$9n - 8$$

8. Solve these equations:

a. $5t - 12 = 8t + 24$

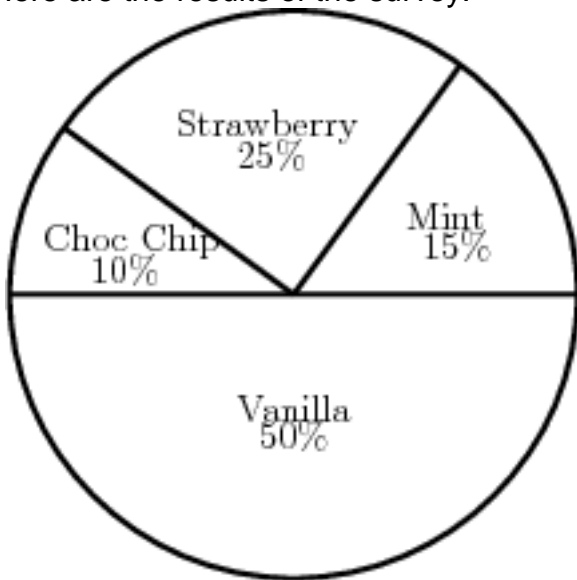
b. $7(x + 2) = 5(x + 4)$

c. $4(2r + 1) - 3(2r - 5) = 29$

d. $\frac{2}{3}(x - 5) = \frac{1}{4}(x + 20)$

9. If $a = -9x - 9$ and $b = 5x - 8$, what is the value of $a - b$?

10. You are planning to make and sell ice creams at a school sports event. You expect to make and sell 300 ice creams. You buy ice cream in 1 liter tubs. Each tub costs \$2. You can fill ten cones from each tub. Each empty cone costs 5¢. You plan to sell each filled cone for 80 cents. Before buying the ice cream, you survey 60 people to find out what flavors they like. Here are the results of the survey:



(a) Work out the quantities you need to buy and their cost.

(b) How much profit do you expect to make on the day?
Show all your reasoning clearly.

11. Emma Watson says that $-2(-10x - 4) - 4$ and $30x - 22$ are equivalent. Do you agree?
Explain or show why.

12. Peter begins his kindergarten year able to spell 10 words. He is going to learn to spell 2 new words every day. Write an inequality that can be used to determine how many days, d , it takes Peter to be able to spell at least 75 words.

Use this inequality to determine the minimum number of whole days it will take for him to be able to spell at least 75 words.

13. Simplify:

a. $4xy + 3x^2y - 3xy + 2x^2y$

b. $3x(x + 4) - 6x - 2x^2$

c. $8a + 4b + 6 - (3a + 2b + 4)$

14. Jon buys fencing for his yard. He pays \$122 for 5 fence posts and 4 fence panels. He pays \$570 for 21 fence posts and 20 fence panels. How much does he pay for 4 fence posts and 3 fence panels?

15. Solve for x :

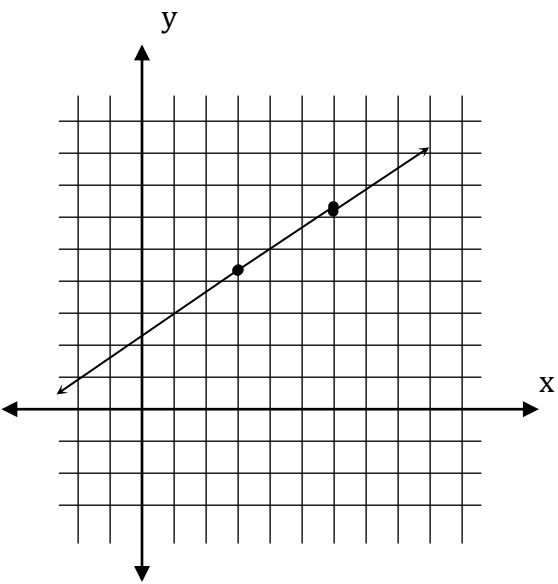
a. $5x = b$

b. $bx = 9b^2$

c. $rsx - rs^2 = 0$

d. $8ax - 7a^2 = 19a^2 - 5a$

16. Fill in the missing information:



Slope is

Y-intercept is

List 3 points on the line.