

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### Unit 2 Review Guide

Identify the property of equality or equation that justifies or completes the missing step.

1. Fill in the missing steps.

Equation	Steps
$4(x - 5) = 28$	Given
	Distributive Property of Equality
$4x = 48$	
$x = 12$	Division Property of Equality

2. Solve and explain each step.

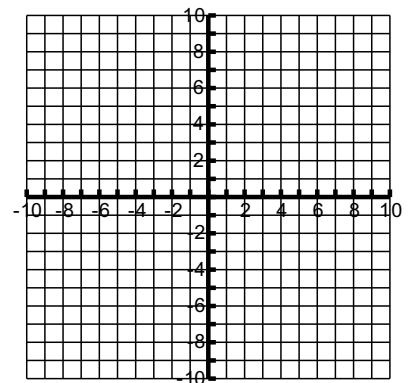
Equation	Steps
$-90 = \frac{5x}{12} + 5$	Given

Solve each system of linear equations by the given method. (2 points for the work/2 points for the answer)

3. Solve by **Substitution**:  
 $3x + 3y = -12$   
 $x = y + 2$

4. Solve by **Elimination**:  
 $3x + 6y = 3$   
 $-2x - 2y = 6$

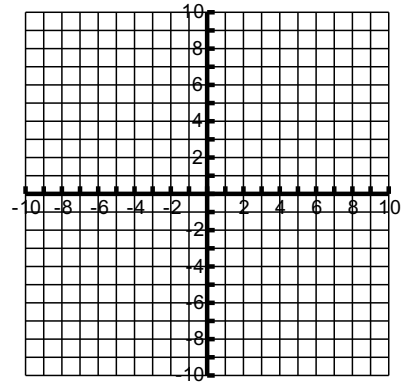
5. Solve by **Graphing**:  
 $y = -x + 7$   
 $y = \frac{2}{3}x + 2$



\_\_\_\_\_6. Solve by graphing:

$$y \leq x + 8$$

$$y > -\frac{2}{3}x - 2$$



**Multiple Choice: Choose the best answer for each question.**

\_\_\_\_\_7. The ordered pair  $(-7, -3)$  is a solution of which linear system?

A.  $2x + 3y = -23$   
 $x + 2y = 11$

B.  $x + 6y = -11$   
 $-7x + 4y = 37$

C.  $3x - y = -4$   
 $-3x + y = -18$

D.  $-2x + 7y = -7$   
 $x - 5y = 8$

\_\_\_\_\_8. Consider the four systems below. Match the systems to their solutions: Infinite Solutions, No solution, and one solution  $(4, -5)$  or  $(-2, -1)$ . You can use your Calculator to solve this equation. © Draw a line connecting the system to its solution.

$x + y = -3$ $y = x + 1$		No Solution
$-x + y = -5$ $y = x + 4$		$(4, -5)$
$y = -5$ $x = 4$		$(-2, -1)$
$x + y = 5$ $2x + 2y = 10$		Infinite Solutions

\_\_\_\_\_9. You are taking a test worth 135 points. There are a total of 45 questions. There are five-point questions and two-point questions. How many two-point questions are on the test?

A. 25

B. 15

C. 30

D. 20

10. Which property is illustrated to here:  $(2 + 7) + 6 = 2 + (7 + 6)$

- A. Commutative Property
- B. Associate Property
- C. Multiplicative Identity
- D. Additive Inverse

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**Free Response Questions. You must show your work to get credit!**

1. A package of hot dogs cost \$2 and a package of hamburger cost \$8. You bought a total of 13 packages of meat and you spent \$74. How many packages of hamburger meat did you buy?

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2. Brooke has an iPhone and notices that it costs 99 cents for apps and \$1.29 for songs.

A. If Brooke downloads both apps and songs, write an equation for the cost,  $C$ , of downloading,  $a$ , apps and,  $s$ , songs

B. If Brooke downloads 14 songs but only has \$27, can she buy 10 apps? Explain your answer.

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3. You have 168 ride tickets. You need 4 tickets to ride the Ferris Wheel and 8 tickets to ride the roller coaster. You ride both rides a total of 26 times. How many times did you ride the roller coaster?

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4. In art class, you are assigned a project. You need to submit 12 drawings. The drawings need to consist of both people and animals. Each drawing of a person is worth 10 points and each drawing of an animal is worth 6 points. You need to get a total of 100 points.

**How many drawings of animals** do you need?

5. Daivon and his friends are getting together this weekend to watch the Football game. He is in charge of picking up everyone's dinner. He gave them a choice of a Subway Combo for \$6 or a Chick-fil-a Meal for \$7. He only has \$50. Write an **inequality** that represents this situation.