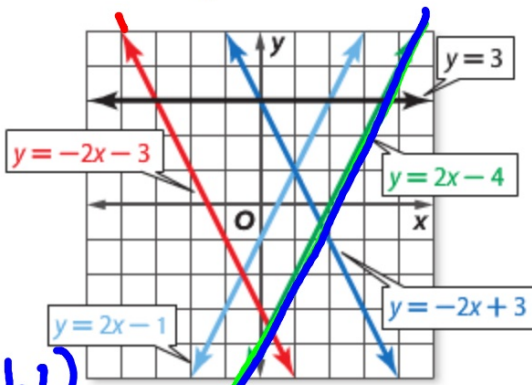Algebra 1 MCT review
* Solve systems by graphing
* Solve systems using substitution
* Solve systems using elimination

Test Fri. 6.1-6.4

Use the graph to determine whether each system is *consistent* or *inconsistent* and if it is *independent* or dependent. (Lesson 6-1)

$y = -2x - 3$

$y = 2x - 1$

$y = 3$

$y = 2x - 4$

$y = -2x + 3$

$y = 2x - 4$

$-4x + 2y = -8$

$+4x \qquad +4x$

$2y = 4x + ^-8$

$\dfrac{2y}{2} = \dfrac{4x}{2} + \dfrac{^-8}{2}$

C + I (1,1)

1. $y = 2x - 1$
   $y = -2x + 3$

2. $y = -2x + 3$
   $y = -2x - 3$

$y = mx + B$

Graph each system and determine the number of solutions that it has. If it has one solution, name it. (Lesson 6-1)

3. $y = 2x - 3$
   $y = x + 4$

4. $x + y = 6$
   $x - y = 4$

☺ (4, 8   )

Use substitution to solve each system of equations.

$y = 4 + 4$

9. $y = x + 4$

$2x + y = 16$

$2 \cdot 4 + 8 = 16$

$2x + (x + 4) = 16$

$3x + y = 16$

$\underline{-4 \quad -4}$

$\dfrac{3x}{3} = \dfrac{12}{3}$

10. $y = -2x - 3$

$x + y = 9$

13. FOOD The cost of two meals at a restaurant is shown in the table below. (Lesson 6-2)

Meal	Total Cost
3 tacos, 2 burritos	$7.40
4 tacos, 1 burrito	$6.45

$$3T + 2B = 7.40$$
$$4T + B = 6.45 \rightarrow \times 2$$

$$-8T - 2B = -12.90$$

$$\frac{-5T}{-5} = \frac{-5.5}{-5}$$

$$T = 1.1$$

a. Define variables to represent the cost of a taco and the cost of a burrito.

b. Write a system of equations to find the cost of a single taco and a single burrito.

c. Solve the systems of equations, and explain what the solution means.

d. How much would a customer pay for 2 tacos and 2 burritos? $6.30

$$T = \$1.10$$
$$B = \$2.05$$
$$2(1.10) + 2(2.05)$$
$$2.20 + 4.10$$

$$3(1.1) + 2B = 7.40$$
$$3.3 + 2B = 7.40$$
$$-3.3 \qquad -3.3$$
$$\frac{2B}{2} = \frac{4.10}{2}$$

15. **MULTIPLE CHOICE** Angelina spent $16 for 12 pieces of
candy to take to a meeting. Each chocolate bar costs $2,
and each lollipop costs $1. Determine how many of each
she bought. (Lesson 6-3)

$$2c + 1L = 16 \qquad 2c + 1L = 16$$
$$c + L = 12 \xrightarrow{-1} -c + -L = -12$$

$$4 + L = 12$$
$$\underline{-4 \qquad -4}$$
$$L = 8$$

$$c = 4$$

Use elimination to solve each system of equations.
(Lessons 6-3 and 6-4)

16. $x + y = 9$
$\ x - y = -3$

17. $x + 3y = 11$
$\ x + 7y = 19$

P 37 9
9 - 39 0

20. MULTIPLE CHOICE The Blue Mountain High School Drama Club is selling tickets to their spring musical. Adult tickets are $4 and student tickets are $1. A total of 285 tickets are sold for $765. How many of each type of ticket are sold?

$$4a + 1s = 765$$
$$a + s \quad 285$$

up 3 hrs
4 mi

down 2 hrs.
5 mi

	D	R	T
→	4	B-c	3
→	5	B+c	2

$B = 2 \frac{mi}{hr}$

$C = \frac{2}{3} \frac{mi}{hr}$

$4 = (2-c)\cdot 3$

$4 = 6 - 3c$

$\frac{-6 \quad -6}{}$

$\frac{-2 = -3c}{-3 \quad -3}$

$\boxed{4 = (B-c)\cdot 3}$

$5 = (B+c)\cdot 2$

$8 = 6B - 6C$

$15 = 6B + 6C$

$\overline{23 = 12B}$

$4 = 3B - 3c \xrightarrow{2}$

$5 = 2B + 2C \xrightarrow{3}$