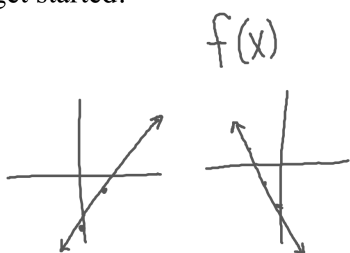


Bell Ringer

Grab sheet and
get started!



Agenda

MRP Questions
Notes: Applications
CW: Colorwalk - Elimination
Closure
Start Homework

13. $x = -9$
 14. $x = -76$
 15. $x = 8$
 16. $x = 12$
 17. $-21 = -4$, No Solution
 18. $x = -9$
 19. $x = 4$

20. $r = \frac{-8}{3}$

26, 34. $l = \frac{p-2w}{2}$ or $L = \frac{p}{2} - w$ $L = \frac{p}{2} - w$

21. $y = 13$

27. $y = \frac{-1}{2}x + 5$

22. IMS

23. $x = 3$

28. $35m < 650$

24. $x = 5$

29. $2x - 3 = 17$

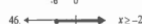
$x = 10$


25. $h = \frac{2A}{b}$

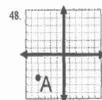
30. $3x + 5 = 20$
 $x = 5$

44.  $x \leq 4$

45.  $x \geq -6$

46.  $x \geq -2$

47.  $x \geq 2$



49. IV

50. (-2, 1)

51. (0, -4)

52. II and y-axis

85. (1, 2)

86. No solution

87. (13, 6)

17.
$$\begin{array}{r} 3(x-7) = x-4+2x \\ 3x-21 = 3x-4 \\ \underline{-3x} \quad \underline{-3x} \\ -21 = -4 \end{array}$$

No Solution

24.
$$\begin{array}{r} 2(x+4)+3x = 5(x+1)+3 \\ 2x+8+3x = 5x+5+3 \\ \underline{-5x} \quad \underline{-5x} \\ 8 = 8 \end{array}$$

IMS

25.
 $2A = \frac{1}{2}bh$; h

$$\frac{2A}{b} = \frac{bh}{b}$$

$$h = \frac{2A}{b}$$

26.
 $2L + 2W = P$; L

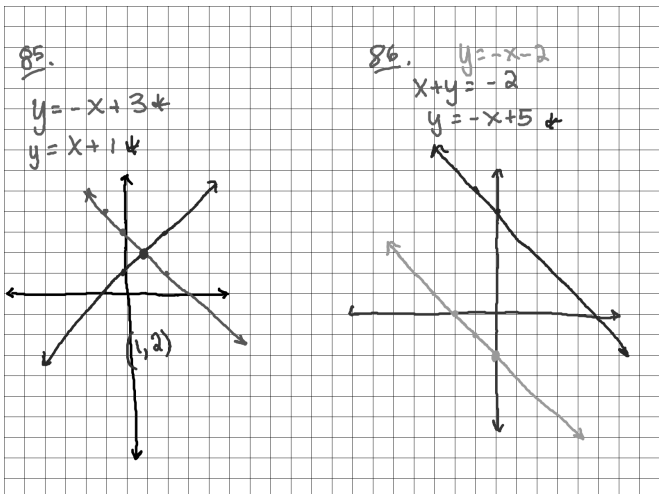
$$\frac{2L}{2} = \frac{P - 2W}{2}$$

$$L = \frac{P - 2W}{2}$$

27.
 ~~$2x + 5 = \frac{x}{3}$~~

$$3(2x + 5) = 9x$$

$$\begin{aligned} 6x + 15 &= 9x \\ -6x & \quad -6x \\ 15 &= 3x \\ x &= 5 \end{aligned}$$



87.

$$4x - 7y = 10$$

$$y - x = -7$$

$$6 - x = -7$$

$$-x = -13$$

$$x = 13$$

(13, 6)

$$4x - 7y = 10$$

$$(-x + y = -7) \cdot 4$$

$$\begin{array}{r} 4x - 7y = 10 \\ -4x + 4y = -28 \\ \hline \end{array}$$

$$-3y = -18$$

$$y = 6$$

3. One number is three less than twice a second number. The sum of the numbers is 33. What are the numbers?

Let statements:

Let one number = $x = 21$

second number = $y = 12$

Equations:

$$x + y = 33$$

$$x = 2y - 3$$

Sentence answer: The numbers are 12 and 21.

$$x + 12 = 33$$

$$x = 2(12) - 3$$

$$2y - 3 + y = 33$$

$$3y - 3 = 33$$

$$3y = 36$$

$$y = 12$$

4. A movie theater charges \$17 for an adult ticket and \$11 for a child's ticket. Saturday the theater sold 365 tickets for \$4,843. How many children tickets were sold on Saturday?

Let statements:

$$\begin{aligned} \text{adult} &= x = 138 \\ \text{child} &= y = 227 \end{aligned}$$

Sentence answer: There were 227 children's tickets sold.

$$\begin{aligned} y &= 365 - x \\ y &= 365 - 138 \end{aligned}$$

Equations:

$$\begin{aligned} x + y &= 365 \\ 17x + 11y &= 4843 \end{aligned}$$

$$17x + 11(365 - x) = 4843$$

$$17x + 4015 - 11x = 4843$$

$$\begin{array}{r} 6x + 4015 = 4843 \\ -4015 \quad -4015 \\ \hline 6x = 828 \end{array}$$

$$\begin{array}{r} 6x = 828 \\ \underline{\quad 6} \quad \underline{\quad 6} \\ x = 138 \end{array}$$

5. Robert has 20 coins consisting of nickels and dimes worth \$1.60. How many of each coin does Robert have?

Let statements:

Equations:

Sentence answer: _____

6. Joseph has coins consisting of dimes and quarters that total \$2.05. He has three more dimes than quarters. How much money does he have in quarters?

Let statements:

$$\begin{aligned} \text{dimes} = D &= 8 \\ \text{quarters} = Q &= 5 \end{aligned}$$

Equations:

$$.10D + .25Q = 2.05$$

$$D = 3 + Q$$

Sentence answer: Joseph has \$1.25 in quarters

$$\begin{aligned} .10(3+Q) + .25Q &= 2.05 \\ .3 + .10Q + .25Q &= 2.05 \\ .3 + .35Q &= 2.05 \\ .35Q &= 1.75 \\ Q &= 5 \end{aligned}$$

7. Two bags of donuts and three cookies cost \$22.75. Three bags of donuts and two cookies cost \$29.75. How much does two bags of donuts and two cookies cost?

cost

Let statements:

$$\begin{aligned} \text{donuts} &= d \\ \text{cookies} &= c \end{aligned}$$

Equations:

$$\begin{aligned} (2d + 3c = 22.75) \times 2 \\ (3d + 2c = 29.75) \times -3 \end{aligned}$$

Sentence answer: 2 donuts & 2 cookies is \$21.

$$\begin{aligned} 2(8.75) + 3c &= 22.75 \\ 17.5 + 3c &= 22.75 \\ 3c &= 5.25 \\ c &= 1.75 \end{aligned}$$

$$\begin{array}{r} 4d + 6c = 45.50 \\ + \quad -9d - 6c = -89.25 \\ \hline -5d = -43.75 \\ \quad -5 \\ \hline d = 8.75 \end{array}$$

$$2d + 2c$$

Colorwalk

Closure

Think-Pair- Share

Think about the three cases of systems of linear equations. How do you know when you have
~ one solution ~ no solutions ~ IMS?

How do you know which method to use?

You will share with your partner and then be prepared to share with the class.