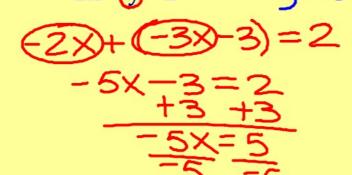
1. What value of **y** satisfies the following system of equations? y = -3x - 3 y = -3(-1) - 3 -2x + 9 = 2 y = 3 - 3

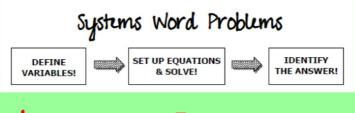


Solve the system. Then use the y-value as your answer

$$2(4y+1) - 3y = 12$$

$$5y+2=12$$
 $5y=10$

SYSTEMS APPLICATION



2. The sum of two numbers is 24 and their difference is 2. What are the numbers?

$$X = 1^{St} \# X + y = 24$$

 $y = 2^{rd} \# X - y = 2$

3. The difference between two numbers is 9. The first number plus twice the other number is 27. Find the two numbers.

$$X = 1^{S+} \# X - Y = 9$$

 $Y = 2^{M} \# X + 2y = 27$

4. The sum of two numbers is 36. (wice the first number minus the second is 6.) Find the numbers.

$$X = 1^{S+} \# X + y = 36$$

 $y = 2^{nd} \# 2X - y = 6$

5. The sum of two numbers is 20. The difference between three times the first number and twice the second is 40. Find the two numbers.

6. The sum of two numbers is 25. One number is twice the second number plus seven. What are the two numbers?

7. The cost of 3 loxes of envelopes and 4 boxes of notebook paper is \$13.25. Two boxes of envelopes and 6 loxes of notebook paper cost \$17. Find the cost of each.

X = cost of envelope box y = cost of n+bk. paper box 3X + 4y = 13.252X + 6y = 17 8. The cost of 12 prairies and 7 poles is \$5.36. Eight oranges and 5 pples cost \$3.68. Find the cost of each.

X = cost per orange y = cost per apple 12X + 7y = 5.368X + 5y = 3.68 9. Gabby and Sydney bought some pens and pencils. Gabby bought 4 pers and 5 elds for \$6.71. Sydney bought 5 pers and 3 pendils for \$7.12. Find the cost of each.

x = cost per pen y = cost per pencil 4x + 5y = 6.715x + 3y = 7.12 10. At a sale on winter clothing, Cody bought two pairs of gloves and four hats for \$43.00. Tori bought two pairs of gloves and two hats for \$30.00. Find the cost of each.

$$X = \$$$
 per gloves
 $y = \$$ per hat
 $2X + 4y = 43.00$
 $2X + 2y = 30.00$

11. A garden supply store sells two types of lawn mowers. The smalle mower costs \$249.99 and the larger mower cost \$329.99. If 30 total mowers were sold and the total sales for a given year was \$8379.70, find how many of each type were sold.

X = # of Small mowers y = # of large mowers X + y = 30249.99x + 329.99y = 8379.70 12. The Town Recreation Department ordered a total of 100 asseballs and bats for the summer baseball camp. Baseballs cost \$4.50 each and bats cost \$20 each. The total purchase was \$822. How many of each item was ordered?

X = # of baseballS Y = # of batS X + Y = 1004.50X + 20y = 822

3. A group of 40 ch bag of popcorn. hotdogs and bag	Hot dogs were \$	2.25 and popco	on a field trip. rn was \$1.75.	Each child receive If the total bill wa	ed either a hot dog s \$83.50, how man

14. One night a theater sold 548 movie tickets. An adult's ticket costs \$6.50 and a child's ticket cost \$3.50. In all, \$2881 was taken in. How many of each kind of ticket were sold?

> X = # of adult tickets Y = # of child tickets X + Y = 5480.50X + 3.50y = 2881

15. Adult tickets 321 tickets w	for the school music ere sold for \$937.50	al sold for \$3.50 and an	and student tickets each kind of ticket v	sold for \$2.50. O vere sold?	n a given nigh

16. A collection of dimes and nickels is worth \$3.30. If there are 42 coins in all, how many of each kind of coin are there?

17. Mary has a collection of nickels and quarters for a total value of \$4.90. If she has 42 coins total, how many of each kind are there?