

Writing Systems of Equations
Assignment

Name Key
Date _____ Period _____

1. Monica built a porch that contained 2 different colors of bricks to create a neat pattern. She purchased the red bricks at \$2 each and the gray bricks for \$3 each. Write a system of equations that could be used to find the number of each type of brick Monica purchased if she spent \$160 on 60 bricks.

Variable: $r = \# \text{ of red bricks}$

Equation: $r + g = 60$

Variable: $g = \# \text{ of gray bricks}$

Equation: $2r + 3g = 160$

2. The Spanish Club purchased 34 tacos for \$40 to sell for a fundraiser. They purchased chicken tacos for \$1 each and beef tacos for \$1.50 each. Write two equations that would be used to solve the system.

Variable: $c = \# \text{ of chicken tacos}$

Equation: $c + b = 34$

Variable: $b = \# \text{ of beef tacos}$

Equation: $c + 1.50b = 40$

3. Sarah enjoys cutting lawns and charges \$20 for each small lawn and \$30 for each large lawn she mows and trims. Sarah earned \$140 for mowing 6 yards. Write a system of equations that could be used to find how many of each type of lawn Sarah mowed.

Variable: $s = \# \text{ of small lawns}$

Equation: $s + l = 6$

Variable: $l = \# \text{ of large lawns}$

Equation: $20s + 30l = 140$

4. $x = k - 12$ $3 \cdot y$
One number is 12 less than three times another number. Their sum is 188. Write two equations that would be used to solve the system.

Variable: $x = 1^{\text{st}}$ number

Equation: $x = 3y - 12$

Variable: $y = 2^{\text{nd}}$ number

Equation: $x + y = 188$

5. Kasey is thinking of two numbers. The sum of the two numbers is -18. Their difference is 38. Write a system of equations that can be used to find the numbers.

Variable: $x = 1^{\text{st}}$ number

Equation: $x + y = -18$

Variable: $y = 2^{\text{nd}}$ number

Equation: $x - y = 38$

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6. Manny has \$4.90 in dimes and quarters. He has 7 more dimes than quarters. Write two equations that would be used to solve the system.

Variable: d=#of dimes

Equation: $d = q + 7$

Variable: q=#of quarters

Equation: $.10d + .25q = 4.90$

7. The perimeter of a rectangle is 78 cm. The length is 7 more than the width. Write two equations that would be used to solve the system.

Variable: l=length

Equation: $2l + 2w = 78$

Variable: w=width

Equation: $l = w + 7$

8. The length of a rectangular carpet is 8 feet more than twice the width. The perimeter is 46 feet. Write a system of equations that could be used to find the length and width.

Variable: l=length

Equation: $2l + 2w = 46$

Variable: w=width

Equation: $l = 2w + 8$

9. A cash register contains 53 coins worth \$4.40. They are all nickels and dimes. Write two equations that would be used to solve the system.

Variable: d=#of dimes

Equation: $n + d = 53$

Variable: n=#of nickels

Equation: $.10d + .05n = 4.40$

10. The width of a rectangular swimming pool is 8 feet less than the length. The perimeter of the pool is 104 feet. Write two equations that would be used to solve the system.

Variable: l=length

Equation: $2l + 2w = 104$

Variable: w=width

Equation: $w = l - 8$