

### 4.5 Systems of Linear Equations Problem Solving DAY ONE CYU

Use when you get it right all by yourself

**S** Use when you did it all by yourself, but made a silly mistake

**H** Use when you could do it alone with a little help from teacher or peer

**G** Use when you completed the problem in a group

**X** Use when a question was attempted but wrong (get help)

**N** Use when a question was not even attempted

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Reading carefully and checking what makes sense	1, 2		
Determining variables		3, 4	
Writing equations		3, 4	
Solving systems		3, 4	
Writing answers in terms of the problem		3, 4	
Checking answers to systems	5, 6	3, 4	

Without actually solving each problem, choose each correct solution by deciding which choice satisfies the given conditions.

- The length of a rectangle is 3 feet longer than the width. The perimeter is 30 feet. Find the dimensions of the rectangle.
  - A. length 8 ft, width 5 ft
  - B. length 8 ft, width 7 ft
  - C. length 9 ft, width 6 ft
  
2. An isosceles triangle, a triangle with at least two sides of equal length, has a perimeter of 20 inches. Each of the equal sides is one inch longer than the third side. Find the lengths of the three sides.
  - A. 6 in, 6 in, 7 in
  - B. 7 in, 7 in, 6 in
  - C. 6 in, 7 in, 8 in

Determine the variables, write the equations, solve the problem, and write your answer in a complete sentence in terms of the problem. Finally, show that you checked your answer.

- Two numbers total 83 and have a difference of 17. Find the two numbers

**Variables**

**Equations**

**Solve**

**Check**

**Solution** The 1<sup>st</sup> # is 33 and the second # is 50.

4. The sum of two numbers is 76 and their difference is 52. Find the two numbers.

Variables

Equations

Solve

Check

Solution The 1<sup>st</sup> # is 64 & 2<sup>nd</sup> # is 12.

Check the following ordered triples in the systems of three variables to determine if the answer is a solution or not. Show all work for full credit.

$$x - y + z = -4$$

5.  $3x + 2y - z = 5$  ; (-1, 5, 2)

$$-2x + 3y - z = 15$$

$$x + y - z = -1$$

6.  $-4x - y + 2z = -7$ ; (3, 3, 1)

$$2x - 2y - 5z = 7$$

yes

no

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**CYU Reflection:** How far can you go: basic, intermediate, or advanced?

**Rate your mastery level!**

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

