

Lesson #11: Solving Systems of Equations Story Problems

By the end of this lesson, you will be able to:

- ~ Solve story problems by elimination
- ~ Solve story problems by substitution

Lesson #11: Systems Story Problems

Mathematical operations in verbal expressions

Addition	Subtraction
plus more than the sum of increased by added to	minus less than the difference of decreased by subtracted from
Multiplication	Division
the product of multiplied by times twice	the quotient of divided by the ratio of half
Exponents	
squared cubed to the _____ power	

Lesson #11: Systems Story Problems

Words that mean "Equal"

- ~ is
- ~ was
- ~ is equivalent to
- ~ yields
- ~ gives
- ~ equals
- ~ are
- ~ results in
- ~ is equal to

Lesson #11: Systems Story Problems

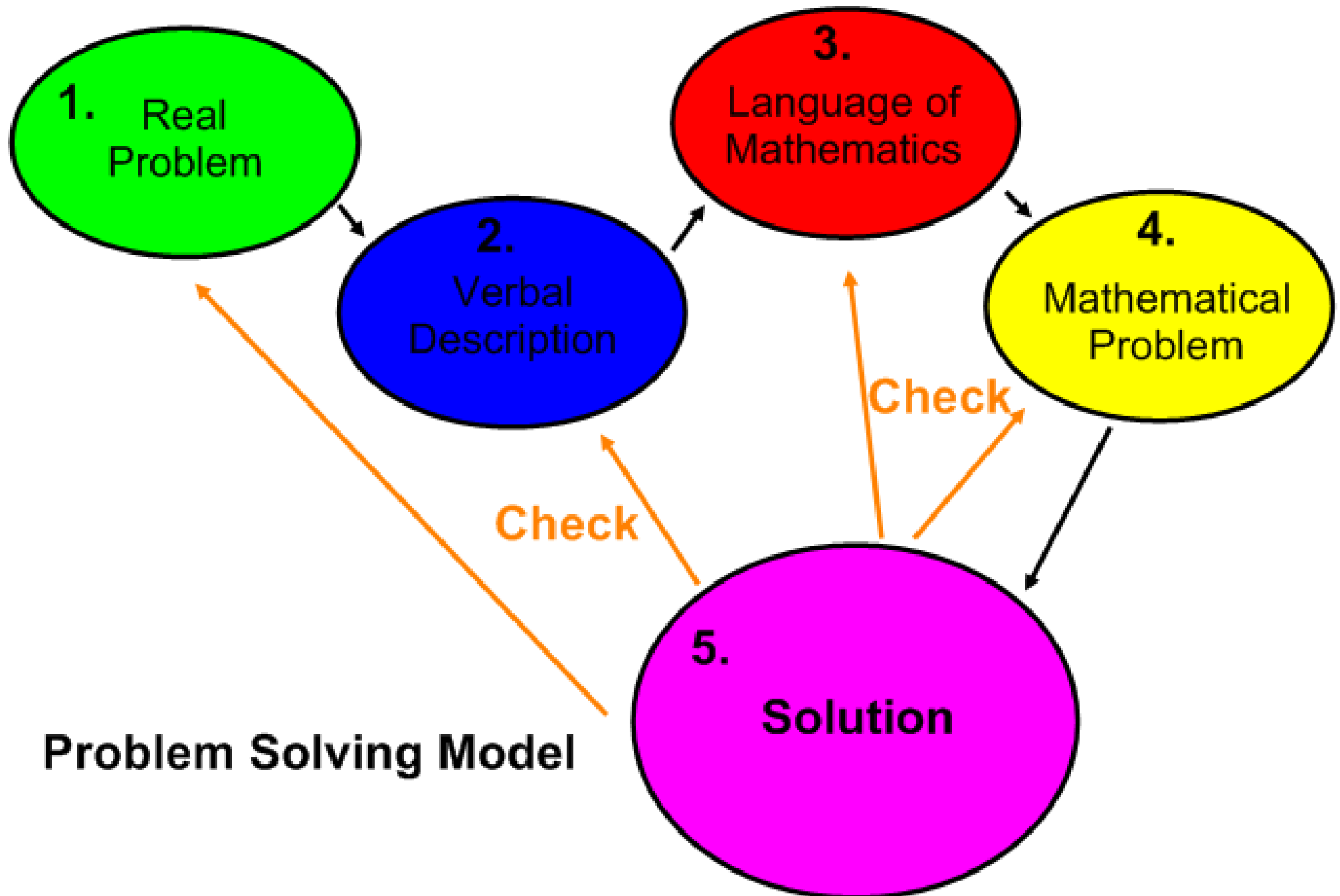
Translate each English Statement into a mathematical statement.

Ex 1: The product of 3 and y is equal to 21.

Ex 2: Two times the sum of 3 and X is equivalent to the product of 5 and X .

Ex 3: The difference of x and 10 equals the quotient of x and 2.

Lesson #11: Systems Story Problems



Problem Solving Model

Lesson #11: Systems Story Problems

Steps for Solving Problems with Mathematical Models

Step 1: Identify what you are looking for.

Step 2: Give Names to the Unknowns.

Step 3: Translate the Problem into the Language of Mathematics.

Step 4: Solve the Equation(s) Found in Step 3.

Step 5: Check the Reasonableness of your Answer.

Step 6: Answer the Question (in a complete sentence).

Lesson #11: Systems Story Problems

Ex 4: Two numbers total 23 and their difference is 3.
Find the numbers.

Step 1: Identify what you are looking for.

Step 2: Give Names to the Unknowns.

Lesson #11: Systems Story Problems

Ex 4: Two numbers total 23 and their difference is 3. Find the numbers.

Step 3: Translate the Problem into the Language of Mathematics.

Step 4: Solve the Equation(s) Found in Step 3.

Lesson #11: Systems Story Problems

Ex 4: Two numbers total 23 and their difference is 3. Find the numbers.

Step 5: Check the Reasonableness of your Answer.

Step 6: Answer the Question (in a complete sentence).

Lesson #11: Systems Story Problems

Ex 5: There are 13 animals in the barn. Some are chickens and some are pigs. There are 40 legs in all. How many of each animal are there?

Step 1: Identify what you are looking for.

Step 2: Give Names to the Unknowns.

Lesson #11: Systems Story Problems

Ex 5: There are 13 animals in the barn. Some are chickens and some are pigs. There are 40 legs in all. How many of each animal are there?

Step 3: Translate the Problem into the Language of Mathematics.

Step 4: Solve the Equation(s) Found in Step 3.

Lesson #11: Systems Story Problems

Ex 5: There are 13 animals in the barn. Some are chickens and some are pigs. There are 40 legs in all. How many of each animal are there?

Step 5: Check the Reasonableness of your Answer.

Step 6: Answer the Question (in a complete sentence).

Lesson #11: Systems Story Problems

Ex 6: Bobby has been saving quarters and dimes. He opened up his piggy bank and determined that it contained 47 coins worth \$9.50. Determine how many dimes and quarters were in the piggy bank.

Step 1: Identify what you are looking for.

Step 2: Give Names to the Unknowns.

Lesson #11: Systems Story Problems

Ex 6: Bobby has been saving quarters and dimes. He opened up his piggy bank and determined that it contained 47 coins worth \$9.50. Determine how many dimes and quarters were in the piggy bank.

Step 3: Translate the Problem into the Language of Mathematics.

Step 4: Solve the Equation(s) Found in Step 3.

Lesson #11: Systems Story Problems

Ex 6: Bobby has been saving quarters and dimes. He opened up his piggy bank and determined that it contained 47 coins worth \$9.50. Determine how many dimes and quarters were in the piggy bank.

Step 5: Check the Reasonableness of your Answer.

Step 6: Answer the Question (in a complete sentence).

Journal #11

Numbers 1-4 in packet

We will stamp your Journal for completion of 1-4 next B1 class.

Assignment #11

Due at the Beginning of B1 in two class periods - Oct 26