Problem Solving Strategies:

With all problem solving strategies the first step is to understand what you need to find or ask yourself what you need to know. The next step is to plan – ask yourself how you can solve the problem. Here are several different strategies to help you find the solution:

Guess and Check: Use your estimation knowledge to make a "reasonable" guess – then look at your answer to see if it is reasonable, too high, or too low. It may take a few guesses to get it right, so just keep making those guesses and checking them until you get one that works.

Draw a Picture: Use simple pictures or symbols to "draw" out what you need to solve. Keep your pictures and labels simple.

Make a List, Table, or Chart: This is a great strategy to use when you are solving a problem where combinations must be determined. If you list all of the possible combinations, you can see if you have considered all of the possibilities. Setting up tables and charts also helps reveal patterns or relationships that may exist in the data.

Identify Too Much or Too Little Information: When you read over a math problem look to see what information is not necessary to solving the word problem – cross through that information! In word problems, you may not receive all the information you need; in that case you would want to identify what other information you do need in order to solve the problem.

Find a Pattern: When you are trying to discover a pattern, ask yourself what relationships you see between the numbers or symbols/shapes in the problem. If they are numbers, how far apart are they from each other? Is there a certain way or amount they are increasing or decreasing by? If they are symbols, can you see a change in the direction they are facing or are more lines being added or taken away from each symbol/shape?

Work Backwards: Look at the problem to decide what the question is asking you to find. Then begin at the end of the question to solve the problem working from the end to the beginning.

Write a Number Sentence: Look at the problem, then write down the information in a number sentence.

Problem 1a:
Suzie Snailfish is standing on her sister Stephanie's shoulders. Together they are 56 inches tall. Suzie is 8 inches taller than Stephanie. How tall is Stephanie?

Problem 1b:
Jamie and Sally sold 16 spaghetti dinner tickets altogether. Jamie sold 4 tickets more than Sally. How many tickets did each girl sell?

Problem 2a:
If there's one thing the Snow family enjoys doing, it's building snowmen! Today they built 18! They put baseball caps on one third of the snowmen. One half of the snowmen are wearing cowboy hats. After that they ran out of caps and hats, so they put scarves on the rest. How many snowmen are wearing scarves?

Problem 2b:
Lesley Lucky has 5 blue chips, 3 yellow chips, and 1 green chip in her bag. What fractional part of the bag is blue?

Problem 3a:
Paula Prestigious is opening her very own deli! She is working on the menu for opening day. Paula has decided to only carry ham, turkey and salami for the opening of her deli. How many kinds of sandwiches can Paula make for her clients in her new deli?

Problem 3b:
Mike Miser is saving up for a new game. He saves $2 the first week. Each week after that he saves twice as much as he saved the week before. If this pattern continues, how much would he save in 6 weeks?

Problem 4a:
Steve Snakmeister is making up 84 different snacks for his 3rd annual Brain Brawl bash. He invited 150 guests – but only 1/6 is coming. This doesn't bother Steve. He still makes 75 bowls of cheese dip. He makes twice as many bowls of salsa. How many guests are coming to Steve's party?

Problem 5a:
Chloe spent $5 to mail a 5-pound package to her Uncle John in Jacksonville. Chloe's sister, Zoe, spent $12 to mail a 12-pound package to Uncle John in Jacksonville. Their brother Joey spent $15 to mail a 15-pound package to him. How much did it cost their brother Bob to mail a 21-pound package to Uncle John in Jacksonville?

Problem 5b:
O XX OOO XXXX OOOOO XXXXXX What comes next in this pattern?

Problem 6a:
Selma Sausage made a large pizza. She gave half the slices to her sister Pepper. She gave 15 slices to her dad, Crusty Clem. She gave another 10 slices to her brother Pepperoni. She had the last 13 slices herself. How many pieces were in the pizza?

Problem 6b:
Jay walked from the Westside of Jacksonville to Fruit Cove. It took him 1 hour 35 minutes to walk from the West Side of Jacksonville to Mandarin. Then it took 35 minutes to walk from Mandarin to Fruit Cove. He arrived in Fruit Cove at 5:15 p.m. At what time did he leave Westside?

Problem 7a:
Brian put 24 cookies into 4 equal groups. How many cookies are in each group?

Problem 7b:
There are 125 crayons in a pile. Mrs. Organized, the teacher, puts the crayons into boxes that hold only 5 crayons each. How many boxes will the teacher need to use?