Assignment 5 focuses on decision making, creative thinking and heuristics.  Few people realize how the way they think is often bounded by ideas that force them to limit their options and think, well, for lack of a better metaphor. inside the box.  Creative thinking isn't something that you must be born with.  While talent helps, like all management skills, you can take what you have and make it even better with experience and practice.  This assignment provides students with a series of problems that are easily solvable except for the fact that the way people think often means they don't see or never even consider solutions that are readily available.  The answers to these problems are in the attachment above. Take the time to try an solve these problems before looking at the solutions or at least make a serious attempt.  Doing so will make a much greater impression on thinking and enhance your problem solving skills and allow you to not only retain what you learn to a greater degree but enhance your ability to apply similar logic skills in the future. S**tudents should attempt to solve the problems using their own reasoningskills before looking at the solutions.**

**The answers to the problems do not need to be included in your assignment submission. The expectation is that you will attempt to answer the questions on your own. I need to see your reasoned conclusions as to why people struggle to find answers to problems when the answer is not obvious or requires 'outside the box' thinking.**

(While not required, having the following items on hand may help students think through some of the following problems: 12 toothpicks or pencils, 10 small circular objects like small coins or buttons, a pencil to write with, and for the last problem, two lollipops and a friend.)

**PROBLEMS:**

**Problem 1**.  A farmer approaches a river crossing while taking a ravenous dog, hungry goose and a bag of corn with him.  At the river, there is a very small skiff that will allow him to row himself and take one of the animals or the bag of corn across, one at a time.  How can he do that when the dog will eat the goose if left alone, just as the goose would eat the corn?  He must get himself and all three of his items (the dog, goose, and corn) across the river.  (Please note there is no tricking involved in any of these problems.  It can be done.)

**Problem 2**.  The following two scenarios are based on a real events.  A woman is driving across the desert, without a cell phone and has a flat tire in the pouring rain.  She manages to jack up the car and takes off the five lug nuts holding the wheel with the flat tire.  Just then, a flash flood washes the lug nuts away beyond recovery deep in the sand.  How can she get the car back on the road?

**Problem 3**.  Some friends are swimming together in a pond.  The area is residential and the pond is ringed with lawns and gardens being watered.  The pond is deep though and has a tangle of water plants growing at the bottom.  One of the friends becomes entangled in the pond plants, underwater, just a foot from the surface of the pool.  He is struggling desperately, but his friends realize they won't be able to free him in time.  What else can the friends do?

**Problem 4**.  Arrange your 12 toothpicks or pencils into four squares.  Once you're finished it should look something like a window or a tall plus sign, with a border on all sides.  Now remove two toothpicks/pencils from the figure you've made to form two perfect squares.  Do not touch any of the other toothpicks or pencils and the form left must be two squares, not rectangles and there should not be any leftovers or extraneous toothpicks or pencils.  Can you do it?

**Problem 5**.  Draw nine dots on a sheet of paper in three rows of three as shown below

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\*     \*     \*

Now connect all nine dots with four straight lines without lifting your pencil off the paper.

**Problem 6**.  Take out your ten circular objects and form them into five straight rows of four objects each.  This may seem hard but it can be done so don't give up too quickly.

**Problem 7**.  You have eight circular coins that all appear to be the same but one of them is not.  All weigh exactly the same save one.  Fortunately you have a balance scale that can tell you if one side weighs more than the other but you can only use it twice.  How can you be sure to find the coin that is different among the eight when you can only use the scale to twice?

**Problem 8**.  In front of you is a nice cylindrically shaped cake that looks, tastes and smells delicious.  You, and seven of your friends have been invited to eat it but before you do, you face a challenge.  You can only cut the cake three times and when you are done, you must have divided the cake into eight equal parts.  Can you do it or does the cake go uneaten?

**Problem 9**.  Take six of your toothpicks or pencils and lay three of them down to form a triangle.  Using the remaining three toothpicks or pencils to form three more triangles of the exact same shape and size so the you have four triangles in front of you.using only the six toothpicks or pencils.

**Problem 10**.  Finally, the last problem is a contest between you and your friend.  Take out the two lollipops and give one to your friend.  With the lollipops still wrapped both you and your friend will place your lollipops on a table in front of you.  Now, without using your hands or elbows or placing your mouth closer than six inches from the lollipop get the candy into your mouth.

**Once students have worked their way down through the list of problems, their task is to identify why finding solutions to problems or situations like these may seem challenging for many.  Your answer should be reasoned and thoughtful. Expressing your opinion is allowed provided you also have research to validate that opinion.**

As a manager, your ability to look for solutions others overlook or reject out of hand can be one of the greatest assets you bring to an organization.

**Bonus Problem**:  It is a dark and stormy night, and you''re driving in your sports car -- a good looking little car--but with only two seats.  Suddenly by the side of the road, you see three people stranded at a bus stop.  One is a stranger who is having a heart attack at that very moment.  Another is a childhood friend who has often saved your life.  He has been begging to ride in your sports car.  The third person is the man or woman of your dreams.  It's love at first sight.  You recognize that you've suddenly found your soul mate, who you may never see again.  You have just one empty seat in your car.  Who do you pick up?  Well you certainly owe a debt of gratitude to your friend but you should also pick up the stranger and save his life.  And what of romance?  As I say, you may never see the person of your dreams again.  What do you do?