No Problem

Demonstrating Problem-Solving Skills

Objectives:

A Explain the importance of problem solving in daily life.

B Demonstrate procedures for solving problems.

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Like everyone, you face problems every day. Some problems, such as a friendly disagreement about where to eat lunch or which movie to watch, are typically easy to solve, right? Other problems, though, like figuring out how to juggle your schoolwork and a job, are much more of a headache. For example, to create a schedule that accommodates school and a job, you have to work with your teachers, your parents, and your boss. You have to arrange transportation to work. And you have to pay attention to your grades and work hard at your job at the same time—not a simple task.

What happens when you face difficult problems? Do you freeze up, unable to make a decision, or do you face your problems head-on? Do you approach problem situations in an organized way, or do you do the first thing that comes to mind? Solving problems isn't always simple, but the more you understand about problem solving, the easier it will be to solve even the most complicated problems.

What's Your Problem?

Humans interact every day. People make eye contact with each other, speak to each other, and carry on conversations with each other—it's virtually unavoidable. On top of that, it's also next to impossible to avoid interacting with things, including the environment, technology, and even animals. After all, who hasn't dealt with a malfunctioning computer or a misbehaving pet?

There are a couple of different ways for us to look at **problems**. We can describe them as issues that need solutions, puzzles to be solved, or even situations where things aren't going our way. Regardless of how we define them, problems typically fall into one of three categories: personal problems, problems with peers, and problems at work.

Personal problems. Personal problems affect you and those closest to you, such as your family members. Personal problems often result in confusion, doubt, unhappiness, anxiety, and depression. These problems follow you to school and work, and you take them with you wherever you go. Examples of this type of problem include parents getting a divorce, the death of a family member, difficulty with schoolwork, or a general feeling that you don't fit in.

Problems with peers. Problems with peers occur among people who are similar in age and background (for instance, classmates, friends, or teammates). This type of problem can range from a simple misunderstanding to a full-blown conflict. Examples include teasing, bullying, and pressure from others to engage in inappropriate activities such as smoking or drinking.

Problems at work. Problems at work can be diverse. They can involve coworkers, supervisors, customers, technology, or even the physical work environment. Examples of problems at work are angry customers, colleagues who don't do their fair share, machines that don't function properly, and a cramped work space where employees are always getting in each other's way.
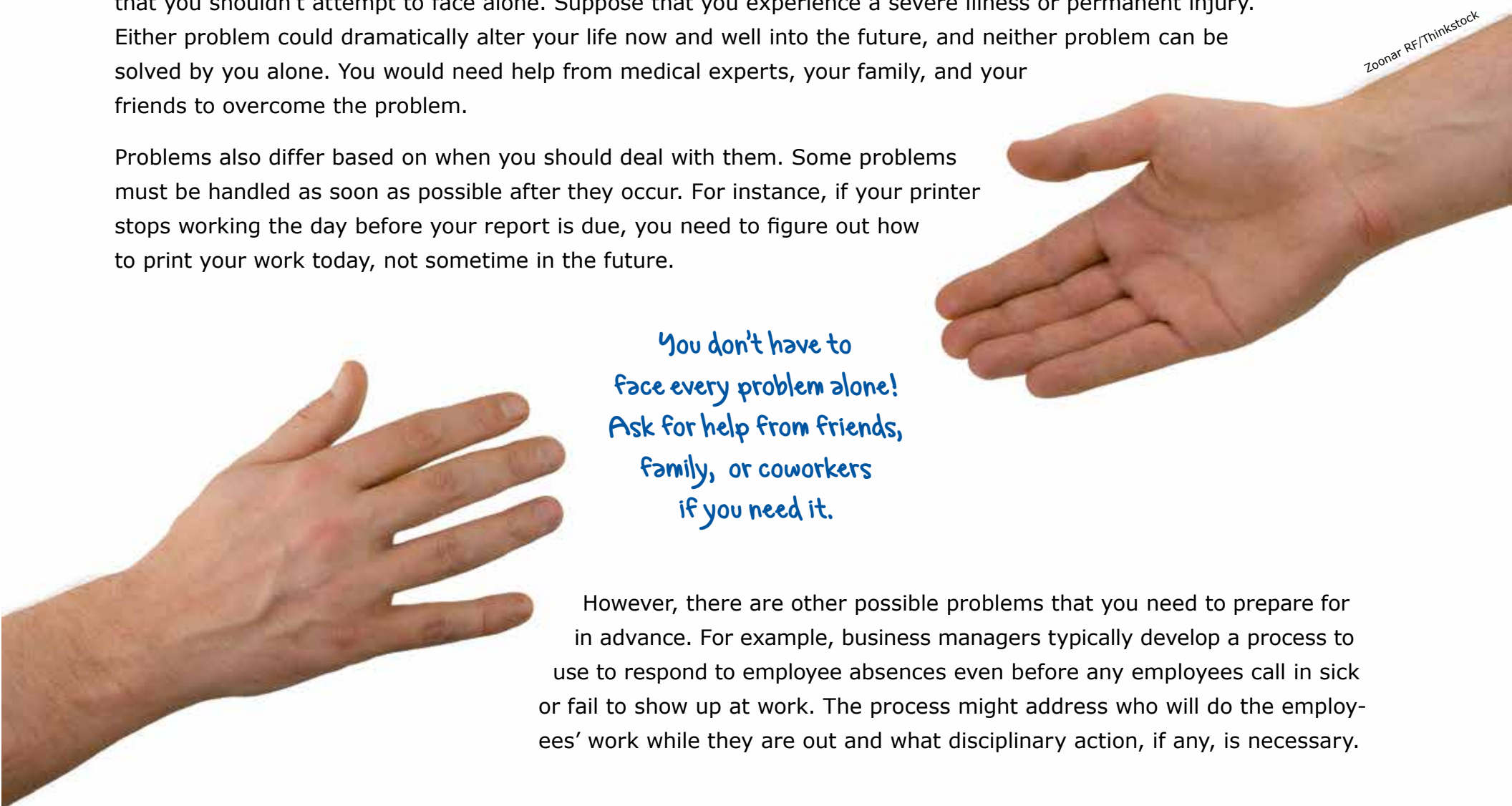
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▲ *Problems can occur in your personal life, with peers, or at work. No matter where they happen, it's your job to solve them.*

Every Problem Is Different

Problems come in all shapes and sizes. Some are minor inconveniences that you can handle on your own, such as getting a stain on your shirt or misplacing your car keys. Others, though, are life-changing events that you shouldn't attempt to face alone. Suppose that you experience a severe illness or permanent injury. Either problem could dramatically alter your life now and well into the future, and neither problem can be solved by you alone. You would need help from medical experts, your family, and your friends to overcome the problem.

Problems also differ based on when you should deal with them. Some problems must be handled as soon as possible after they occur. For instance, if your printer stops working the day before your report is due, you need to figure out how to print your work today, not sometime in the future.

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You don't have to face every problem alone! Ask for help from friends, family, or coworkers if you need it.

However, there are other possible problems that you need to prepare for in advance. For example, business managers typically develop a process to use to respond to employee absences even before any employees call in sick or fail to show up at work. The process might address who will do the employees' work while they are out and what disciplinary action, if any, is necessary.

What Makes Problem Solving So Important?

You've probably heard the term "problem solving" hundreds of times before. But what does it really mean? Simply put, **problem solving** is finding your way over whatever obstacle you are facing. It is taking the challenges we encounter and turning them into opportunities to create something positive.

Learning to be a problem solver is important. Mastering this skill can help you in your relationships with others. Let's say that you and a coworker constantly disagree about who is responsible for completing different aspects of a particular task. Life would be better for everyone in your workplace if the two of you ended your conflict and divided up the work in a way that satisfied both of you.

Learning how to solve problems can also help you to accomplish your personal and professional goals. You are bound to encounter obstacles on your path to success. It is up to you to figure out how to overcome the obstacles and solve your problems. For example, if you are turned down for a job because you didn't do well in the interview, you could practice interviewing with a friend or mentor to increase your chances of success the next time that you apply for a job.

In the article "Problem Solving—The Silent Skill Employers are Starting to Notice," the College Foundation of North Carolina explains how problem-solving skills can help you get a job: https://www1.cfnc.org/Home/Article.aspx?articleId=98m6uCUN7bVZl2KzS3xcHAXA-P3DPAXXAP3DPAX&level=3XAP2FPAX6J7I3kztATGuYyXAP2BPAXDahIQXAP3DPAXXAP3DPAX.

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Summary

Problem solving is a skill that you will use throughout your entire life. Some problems are personal problems, others are problems with peers, and still others are problems at work. The majority of these problems will be small, but many will be large and feel overwhelming. Your ability to deal with these situations is determined in large part by your problem-solving ability.

TOTAL RECALL

1. What are three categories of problems?

2. How do personal problems differ from problems with peers?

3. What are two examples of problems you might encounter at work?

4. Why is it important to learn problem solving?

THE GRAY ZONE

Everyone in your office knows that your coworker, Rob, has been having a hard time lately. He's been showing up late almost every day and sometimes even missing work altogether. When he does show up, he misses deadlines and reeks of alcohol. Rob has always been nice to you, but it's clear that he's not giving 100% to his job. You're pretty sure the only reason your boss hasn't fired him is because your office is understaffed and you need all the help you can get. And even though Rob isn't being a great employee, he often talks about how much he needs this job so that he can pay off his student loans and make his car payment.

One day last week, you walked past Rob's desk and saw that he was asleep! Curious, you sniffed the mug on his desk and were shocked—it smelled strongly of alcohol. Not only has Rob been missing work and inconveniencing the whole company because of his alcohol use, but he's been drinking on the job, too!

You're not sure what to do. If you tell your boss about Rob's behavior, you're pretty sure Rob will be fired, and you know he needs this job. However, Rob is bringing the whole team down, and you're afraid he's endangering himself and others with his alcohol use. Plus, your employee handbook states that it's strictly against company policy to drink on the job. You want to do what's best for Rob and the company, but you're just not sure what that is. How can you solve this problem?

Problem Solving: What's Your Approach?

There's more than one way to solve any problem. The approach that you choose depends on your comfort level and experience with a particular approach as well as with the problem itself. It may also depend on how you think best. Logical thinkers who think things through in a step-by-step manner will probably prefer the seven-step method. People who rely on their intuition may prefer the intuitive approach to problem solving. It's a good idea to become familiar with both of these approaches. That way, if you get stuck on a problem, you can always try another problem-solving approach.

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Seven Steps to Problem Solving

The seven-step approach to solving a problem is easy to follow, as long as you don't skip steps. You may be tempted to rush through the seven steps—don't do it! You get the best results when you invest the time to do it systematically. After you have gained experience, the seven steps will become second nature, and you will move through them more quickly.

1. **Define the problem.** Starting the problem-solving process is often the hardest step, but it's also the most important step. That's because if you define the problem incorrectly, you will solve the wrong problem. The way you define the problem determines the direction you go in solving it, so be as specific and precise as possible. Write the problem down, and express it in many different ways. Finally, and perhaps just as importantly, determine if the problem really is a problem. Ask yourself, "Is this situation worthy of my time and attention?"

   Suppose that we work for a major league baseball team that is moving into a new stadium. The team's old ballpark did not sell alcohol, nor did it allow spectators to bring alcohol into the stadium. As a result, rather than coming out to see the team play in person, many fans chose to watch the games in the comfort of their homes with their drink of choice in hand, year after year.

Try out these tricks the next time you face a problem:

- **Divide and conquer the problem.** Break down a large problem into multiple smaller problems that are easier to solve.

- **Do some lateral thinking.** Look at a problem from multiple points of view. Getting a new perspective on the problem may make solving it much simpler.

- **Try some empirical thinking.** Compare a current problem to ones that you've faced in the past. What did you do in similar situations? Would any of those solutions work for this problem, or should you try something new?
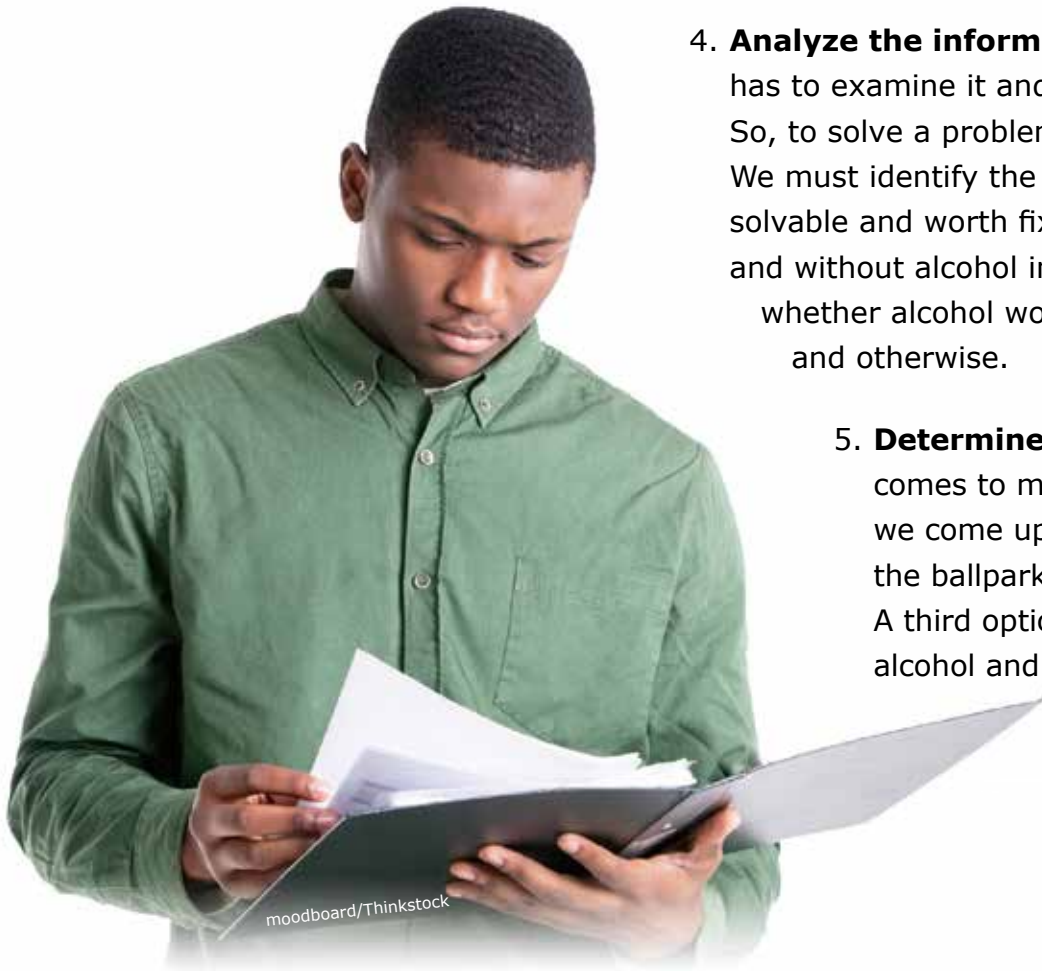
However, moving into a new stadium is a perfect opportunity to change all this, and we, as team employees, are responsible for deciding whether this change should occur. The issue or problem that we face is to determine whether or not to permit alcohol in the new stadium and, if so, how. Our problem statement is specific and precise, and since our bosses passed this task down to us, the problem is definitely worth our time and attention.

2. **State and check your assumptions.** Everyone makes assumptions about people and situations. Most of the time, we aren't even aware of our assumptions. In problem solving, we must look at our assumptions closely because they influence the way we approach problems. In short, we must determine if our assumptions about our problem are correct. For example, if you assume that people who drink alcohol are troublemakers, then you're more likely to decide not to allow alcohol in the ballpark.

3. **Collect information.** Collecting information is critical if we are to arrive at the best possible solution. Identify the people, processes, and equipment that are involved in your problem. Locate information that can help to explain why the situation is a problem. And, just as importantly, make sure that you gather your information from reliable sources. To determine whether or not to permit alcohol, for instance, we need to find out how many tickets we would sell if we allowed people to drink alcoholic beverages at the games. On one hand, we would probably sell more tickets to people who want to drink while they watch the games, but we might lose some paying customers as well. Some individuals might choose to stay away from the stadium if people around them are allowed to drink alcohol.

British cartoonist, William Ely Hill

▲ *Is this a drawing of a young woman, or an old woman? Things aren't always what they seem at first glance! It's important to check your assumptions and look at your problems from multiple angles.*
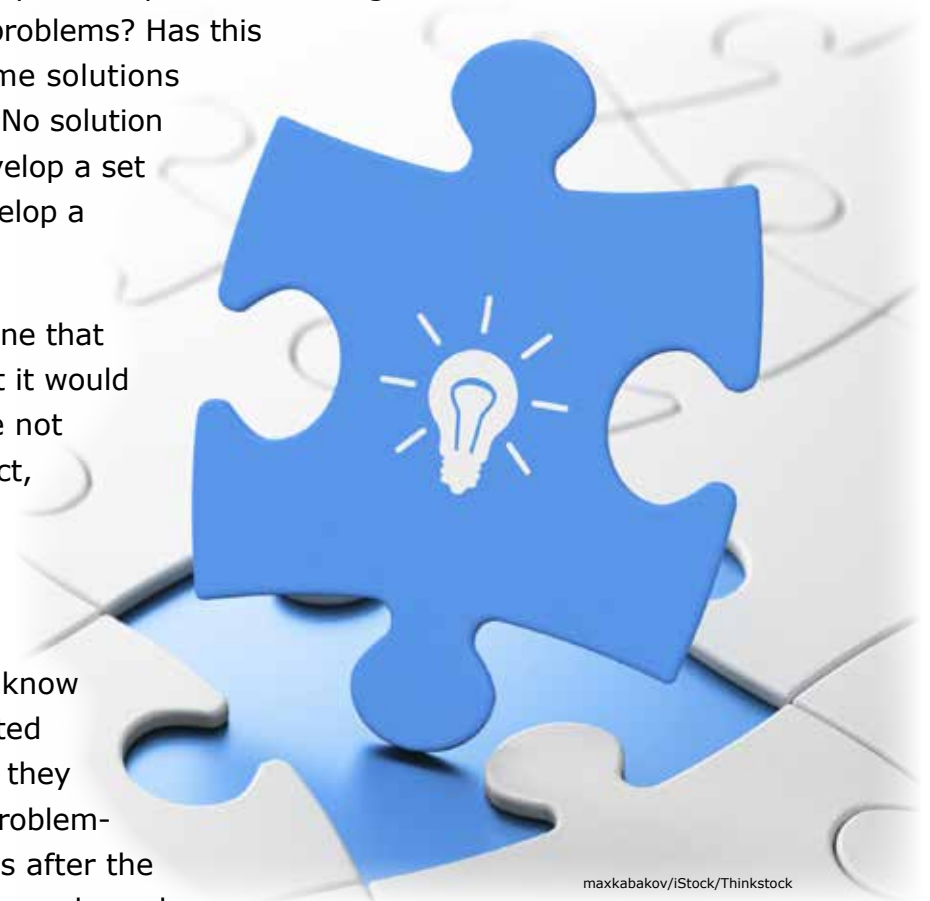
4. **Analyze the information.** Information is of little use by itself. Someone has to examine it and add meaning for it to be useful—this is called analysis. So, to solve a problem, we must determine the reasons for the problem. We must identify the problem's causes and determine if these causes are solvable and worth fixing. How can we analyze our forecasted sales with and without alcohol in the ballpark? We can use the information to determine whether alcohol would make things better or worse for us, financially and otherwise.

5. **Determine possible solutions.** Instead of using the first solution that comes to mind, try to think of all possible solutions. What solutions can we come up with for the ballpark? We might not allow any alcohol in the ballpark. Or we might permit spectators to bring their own alcohol. A third option would be for us to permit spectators to bring their own alcohol and also for us to sell alcohol at the stadium. A fourth solution would be for us to sell alcohol at the stadium but not allow spectators to bring their own with them.

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6. **Select and implement a solution.** Each solution needs to be examined carefully to see if it will solve the problem. Ask yourself questions such as, "What are possible positive and negative consequences of the solution? Could this solution cause any new problems? Has this solution been tried before? Did it succeed or fail, and why?" Some solutions will be discarded as not practical, too expensive, too difficult, etc. No solution is entirely perfect, but you should be confident in your choice. Develop a set of criteria to use to determine if the solution is a success, and develop a plan of action to implement that solution.

   Let's say that based on our research into the problem, we determine that the best plan of action is no action. In other words, we decide that it would be in the best interests of the fans, players, and team as a whole not to permit alcohol into the stadium. If our sales forecasts are correct, there is a very good chance that simply moving into the new ball-park will nearly double our ticket sales. With numbers like those, who needs to add alcohol to the equation?

7. **Evaluate the solution.** The problem cannot be closed until you know whether the solution has worked. Determine the benefits generated by the solution, and address any drawbacks to the solution before they turn into problems of their own. And, if a solution fails, start the problem-solving process over again. For example, suppose that six months after the new ballpark opens, we determine that ticket sales have not increased nearly as much as we had hoped. As a result, we might review our problem to determine if permitting alcohol would be a better solution after all.

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Another Approach to Problem Solving: Use Your Intuition

A different approach to problem solving is called the intuitive approach. Have you ever had a gut feeling about something? That's called **intuition**. The intuitive approach still involves defining the problem, stating and checking any assumptions, and collecting information about the problem. The analysis step is different, though. Instead of examining the information, going over and over it, intuitive problem solvers simply wait. They may set the problem aside or sleep on it. While the intuitive problem solver goes about his/her day, the person's subconscious mind is hard at work. The solution to the problem appears in the form of an intuitive flash or a hunch, and it feels right.

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This video from TEDx Talks, "Learned Intuition: Patrick Schwerdtfeger at TEDxSacramentoSalon," presents the idea that intuition = experience + expertise: https://www.youtube.com/watch?v=_FfypyFsGhk.

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What do you think? Have you ever used intuition to solve a problem?

Things to Avoid When Problem Solving

- Failing to ask for help
- Misinterpreting the problem
- Analyzing too much and acting too little
- Acting too quickly
- Neglecting to develop a "Plan B"
- Failing to implement the solution properly

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Be Creative When Solving Problems

There are several useful tools that can help you look at problems in new ways, including brainstorming, reverse brainstorming, and mind mapping. Let's take a look at each, and remember to have fun!

- **Use Your Brain: Brainstorming**

  Brainstorming is most useful when more than one person is involved and when a time limit is involved. Everyone's ideas are welcome, and no judgments should be made about ideas. Every point of view is valuable, and brainstormers are encouraged to expand upon others' ideas. Brainstormers must concentrate on the issue or problem at hand and think of as many different ideas as possible. Group members should consider even the wackiest ideas because you never know when a wacky idea may prompt someone to think of a unique, yet doable, solution.

  Not everyone thinks brainstorming is the best way to come up with an idea. This video from the RSA, "Jonah Lehrer on Brainstorming," points out some perceived limitations of brainstorming: https://www.youtube.com/watch?v=RgPIkx2JyQU. What do you think? Do you think it's better to be critical of ideas or accept them nonjudgmentally? How has brainstorming worked for you in the past?

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▲ *Brainstorming is best when everyone is involved! Encourage all group members to share their thoughts and expand upon others' ideas.*

- **Put It in Reverse: Reverse Brainstorming**

  To do some reverse brainstorming, write your problem down. Then, instead of brainstorming possible solutions, think of things that could make the problem worse. For example, instead of "Permit alcohol in the stadium," you might write, "Don't allow fans to drink alcohol at the ballpark or at home," or "Don't permit alcohol or food in the stadium."
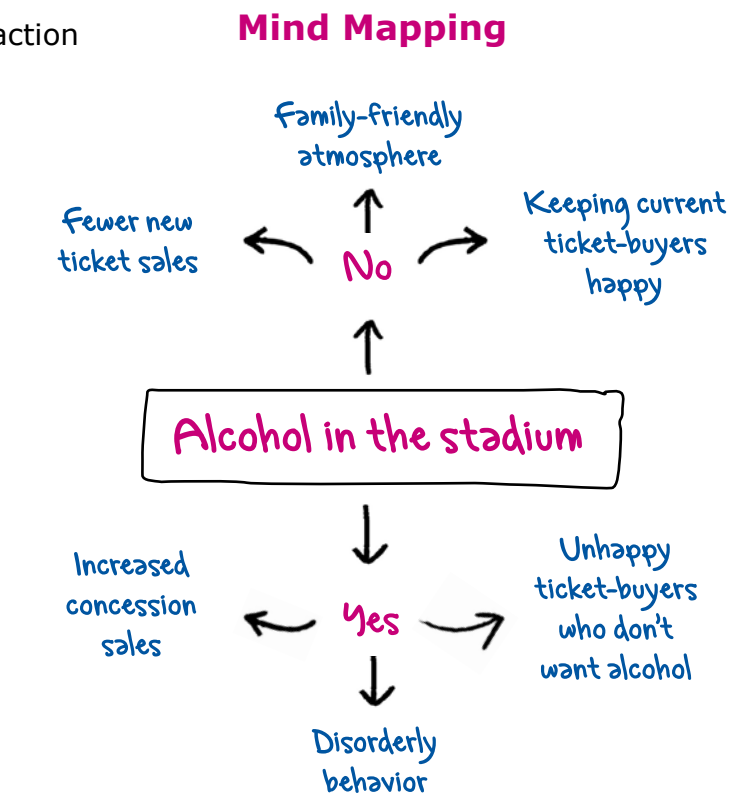
  At the end of the reverse brainstorm, explore each negative statement to see if you can find new ideas for improvement. After this reverse brainstorm, we might decide to offer some different products (e.g., designer coffees, better food, etc.) at the ballpark to take the place of alcohol.

  You can learn more about reverse brainstorming and see an example of it in action in the article "Reverse Brainstorming: A Different Approach to Brainstorming" from MindTools: https://www.mindtools.com/pages/article/newCT_96.htm.

- **Where's the Map?: Mind Mapping**

  Mind maps allow your brain to think the way it wants to, meaning that you don't force it to think logically or step by step. Instead, you just shout out ideas as they come to you, even if they appear random and chaotic.

  Like brainstorming, mind mapping works best in a group. To begin the mind map, write key words and/or draw pictures representing the problem in the middle of a piece of paper. Then, build on each others' ideas, adding your own words and/or pictures to the mind map as appropriate. Draw arrows to show the relationship between concepts. Capture all ideas, your own as well as those of others. Your next step is to organize the materials and put the thoughts and ideas in some sort of order. Then, use this information to help you solve the problem.

Mind Mapping

Family-friendly atmosphere

Fewer new ticket sales ← No → Keeping current ticket-buyers happy

Alcohol in the stadium

Increased concession sales ← Yes → Unhappy ticket-buyers who don't want alcohol

Disorderly behavior

Summary

There are many different approaches to problem solving. One of the most popular is the seven-step method, which involves defining the problem, stating and checking your assumptions, collecting information, analyzing the information, determining possible solutions, selecting and implementing a solution, and evaluating the solution. Intuitive problem solving is another approach to problem solving. It involves letting your subconscious mind work on a problem while you sleep or go about your day. Brainstorming, reverse brainstorming, and mind mapping are all good tools to use to look at problems in new, creative ways.

TOTAL RECALL

1. Describe the seven-step approach to solving problems.

2. Why is it important to define the problem correctly?

3. What does it mean to state and check your assumptions?

4. What types of questions should you ask yourself when selecting and implementing a solution?

5. What is the difference between the seven-step approach and the intuitive approach to problem solving?

6. Explain three different tools that can be used to look at problems in new, creative ways.