

**I CERTIFY THAT ALL SEMESTER 5/PROBLEM SOLVING OUTCOMES  
HAVE BEEN COMPLETED:**

**DATE**

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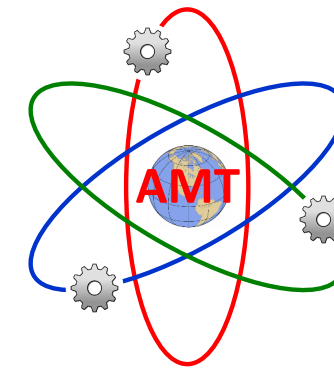
**SIGNATURE**

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*AMT Leader*

**TOYOTA**

***Advanced Manufacturing Technician***



**Manufacturing Core Exercises**

**MCE 4: Problem Solving**  
***Critical Thinking***  
***for Continuous Improvement***

# Outcomes

## AMT SemeSter 4 Manufacturing Core Exercise Activity Outcomes

### *PROBLEM SOLVING*

- State the definition of a problem, including each aspect of the problem illustration
- Draw and label the Toyota Problem diagram
- Definitively state the 8-step Problem Solving Process
- Thoroughly explain each step of the Problem Solving Process
- State each one of the Drive & Dedication Principles
- Thoroughly explain each of the Drive & Dedication Principles
- Do a "talk through" of a completed problem example.
- Perform a school-based Problem Solving exercise.
- Present problem to work/school panel
- Perform a work-based Problem Solving exercise.
- Present problem to work/school panel
- Submit Problem Solving Essay

# PROBLEM SOLVING Essay

You have completed your Problem Solving Exercise Outcomes. You have also participated in activities both at work and at school regarding Problem Solving. You should, yet again, be a different person than you were a few months ago.

Problem Solving is considered to be the most basic business practice at lean manufacturing companies. All team members—Production, Skilled Maintenance, Office & Professional, and Management—should practice Problem Solving. Team members should be as conversant in it as managers.

Your assignment is to write an essay discussing the importance of Problem Solving.

Another goal of the essay is to give you the opportunity to develop your good writing skills, both in using effective writing basics such as grammar, structure, and spelling, and in effectively communicating a message.

Guidelines:

- Length: 1-3 pages.
- Content: Do you have a deeper understanding of Problem Solving. Do the principles of Problem Solving extend beyond the workplace into other aspects of life? What is the connection of Problem Solving to Standardized Work? Has learning Problem Solving improved your ability in other aspects of critical and analytical thinking? These are just thought starters. There is much more that can be included.
- This essay does not need to be foot-noted unless your writing needs it. Use any accepted writing standard or structure that you wish, but be sure to use correct practices and techniques.
- Write in any medium that you wish (paper, computer, etc.) The final product should be in electronic form so that it can be both e-mailed and saved as a file. It should be in a form that can easily be converted to Microsoft Word.
- Double check spelling!
- Print a copy of your final product.
- E-mail your file to the following parties:
  - ◊ AMT Leader: \_\_\_\_\_ (e-mail address)
  - ◊ School AMT Coordinator: \_\_\_\_\_ (e-mail address)
  - ◊ North American Toyota AMT Regional Assistant: [jim.mattingly@tema.toyota.com](mailto:jim.mattingly@tema.toyota.com)
  - ◊ Additional parties as directed: \_\_\_\_\_ (e-mail address)

**DUE DATE**

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# PROBLEM SOLVING Basics

**STATE FROM MEMORY THE DEFINITION OF A PROBLEM, INCLUDING EACH ELEMENT OF THE PROBLEM ILLUSTRATION.**

**DATE**

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**DRAW FROM MEMORY THE BASIC PROBLEM DIAGRAM.**

**DATE**

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**STATE FROM MEMORY EACH STEP OF THE 8-STEP PROBLEM SOLVING PROCESS.**

**DATE**

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**THOROUGHLY EXPLAIN STEP 1 OF PROBLEM SOLVING.**

**DATE**

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**THOROUGHLY EXPLAIN STEP 2 OF PROBLEM SOLVING.**

**DATE**

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**THOROUGHLY EXPLAIN STEP 3 OF PROBLEM SOLVING.**

**DATE**

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**THOROUGHLY EXPLAIN STEP 4 OF PROBLEM SOLVING.**

**DATE**

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**THOROUGHLY EXPLAIN STEP 5 OF PROBLEM SOLVING.**

**DATE**

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**WORK-BASED PROBLEM SOLVING PRESENTATION:**

**DATE**

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REVIEWERS AT THE PRESENTATION

NAME

TITLE

**THOROUGHLY EXPLAIN STEP 6 OF PROBLEM SOLVING.**

**DATE**

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**THOROUGHLY EXPLAIN STEP 7 OF PROBLEM SOLVING.**

**DATE**

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**THOROUGHLY EXPLAIN STEP 8 OF PROBLEM SOLVING.**

**DATE**

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**STATE FROM MEMORY EACH OF THE 10 DRIVE & DEDICATION  
ELEMENTS.**

**DATE**

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**THOROUGHLY EXPLAIN THE DRIVE & DEDICATION PRINCIPLE OF  
XXX .**

**DATE**

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**THOROUGHLY EXPLAIN THE DRIVE & DEDICATION PRINCIPLE OF  
XXX .**

**DATE**

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**THOROUGHLY EXPLAIN THE DRIVE & DEDICATION PRINCIPLE OF  
XXX .**

**DATE**

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**THOROUGHLY EXPLAIN THE DRIVE & DEDICATION PRINCIPLE OF  
XXX .**

**DATE**

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**THOROUGHLY EXPLAIN THE DRIVE & DEDICATION PRINCIPLE OF  
XXX .**

**DATE**

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**COMPLETE A WORK BASED PROBLEM SOLVING ACTIVITY.**

**DATE**

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Post photos and examples on this page and the next.

**SCHOOL-BASED PROBLEM SOLVING PRESENTATION:**

**DATE**

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REVIEWERS AT THE PRESENTATION

NAME

TITLE

**THOROUGHLY EXPLAIN THE DRIVE & DEDICATION PRINCIPLE OF  
XXX .**

**DATE**

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**THOROUGHLY EXPLAIN THE DRIVE & DEDICATION PRINCIPLE OF  
XXX .**

**DATE**

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**THOROUGHLY EXPLAIN THE DRIVE & DEDICATION PRINCIPLE OF  
XXX .**

**DATE**

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**THOROUGHLY EXPLAIN THE DRIVE & DEDICATION PRINCIPLE OF  
XXX .**

**DATE**

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**THOROUGHLY EXPLAIN THE DRIVE & DEDICATION PRINCIPLE OF  
XXX .**

**DATE**

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**COMPLETE A TALK-THROUGH OF A  
REAL PROBLEM SOLVING ACTIVITY.**

**DATE**

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**COMPLETE A SCHOOL BASED PROBLEM SOLVING ACTIVITY.**

**DATE**

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Post photos and examples on this page and the next.