# Detailed Explanation Examples And 50 Solved Problems

Are you eager to enhance your problem-solving skills? Looking for detailed explanations and examples to sharpen your understanding? In this article, we will provide you with a comprehensive guide that includes 50 solved problems across various domains.

Why Problem-Solving Skills Matter?

Problem-solving skills are crucial for success in both personal and professional life. Effective problem solvers possess the ability to analyze complex situations, think critically, and develop innovative solutions. These skills not only enhance one's decision-making abilities but also promote personal growth and development.

Importance of Detailed Explanation Examples

While learning problem-solving techniques, having access to detailed explanation examples can significantly strengthen one's grasp of concepts. By studying solved problems, learners can gain insights into the step-by-step approach used to unravel complex scenarios.
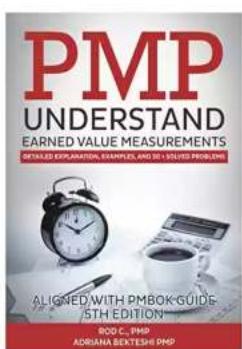
PMP Understand Earned Value Measurements: Detailed Explanation, Examples, and 50+ solved problems by SuperSummary([Print Replica] Kindle Edition)

★★★★★ 5 out of 5

Language	: English
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Screen Reader	: Supported
Print length	: 94 pages
Lending	: Enabled

1. Mathematics

Mathematics is a fundamental discipline that requires strong problem-solving skills. Let's explore a few solved problems that will help you master various mathematical concepts.

Problem 1: Solving Linear Equations

Given the equation 3x + 5 = 11, find the value of x.

Solving Equations Examples

Solve the following equations

Balancing method

$$8a - 5 = 11$$
$$+5 \quad +5$$
$$8a = 16$$
$$\div 8 \quad \div 8$$
$$a = 2$$

Function machine method

$$8a - 5 = 11$$
$$a \rightarrow \times 8 \rightarrow -5 \rightarrow 11$$
$$2 \leftarrow \div 8 \leftarrow +5 \leftarrow 11$$
$$a = 2$$

Balancing method

$$10 + 6y = 34$$
$$-10 \qquad -10$$
$$6y = 24$$
$$\div 6 \quad \div 6$$
$$y = 4$$

Function machine method

$$10 + 6y = 34$$
$$y \rightarrow \times 6 \rightarrow +10 \rightarrow 34$$
$$4 \leftarrow \div 6 \leftarrow -10 \leftarrow 34$$
$$y = 4$$

Balancing method

$$\frac{x}{12} - 5 = 4$$
$$+5 \quad +5$$
$$\times 12 \quad \frac{x}{12} = 9 \quad \times 12$$
$$x = 108$$

**Function machine method**

$$\frac{x}{12} - 5 = 4$$
$$x \rightarrow \div 12 \rightarrow -5 \rightarrow 4$$
$$108 \leftarrow \times 12 \leftarrow +5 \leftarrow 4$$
$$x = 108$$

Problem 2: Calculating Areas of Geometric Figures

Find the area of a triangle with base length of 6 units and height of 4 units.

Area of a triangle

$$A = \frac{1}{2} bh$$

$$= \frac{1}{2} (6 \text{ cm})(4 \text{ cm})$$

$$= 12 \text{ cm}^2$$

h=4 cm

b= 6 cm
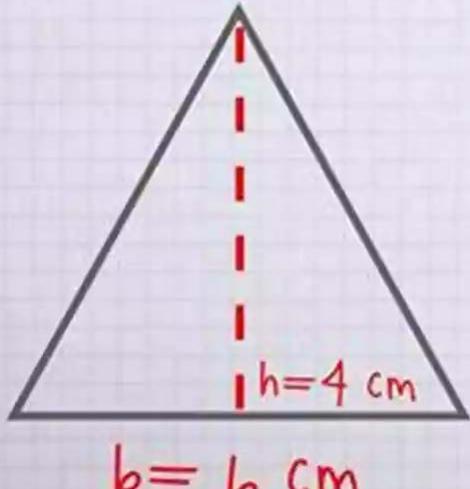
2. Physics

Physics deals with the understanding of the natural world and solving real-life problems. Let's dive into a couple of examples that illustrate principles from this fascinating subject.

Problem 1: Calculating Velocity

A car travels a distance of 100 kilometers in 2 hours. What is its average velocity?

8A

I_1

c

$-$ $+$ 6Ω $-$

$+$ 8Ω $-$

4Ω

$+$

I_2

$3A$

I_3

$+$

1Ω

$20V$

a

b

d

d

$I_1 \rightarrow a - l$ path

$I_1 = 8A$ —①

mantally remove C.S.

Mesh 2 and mesh 3
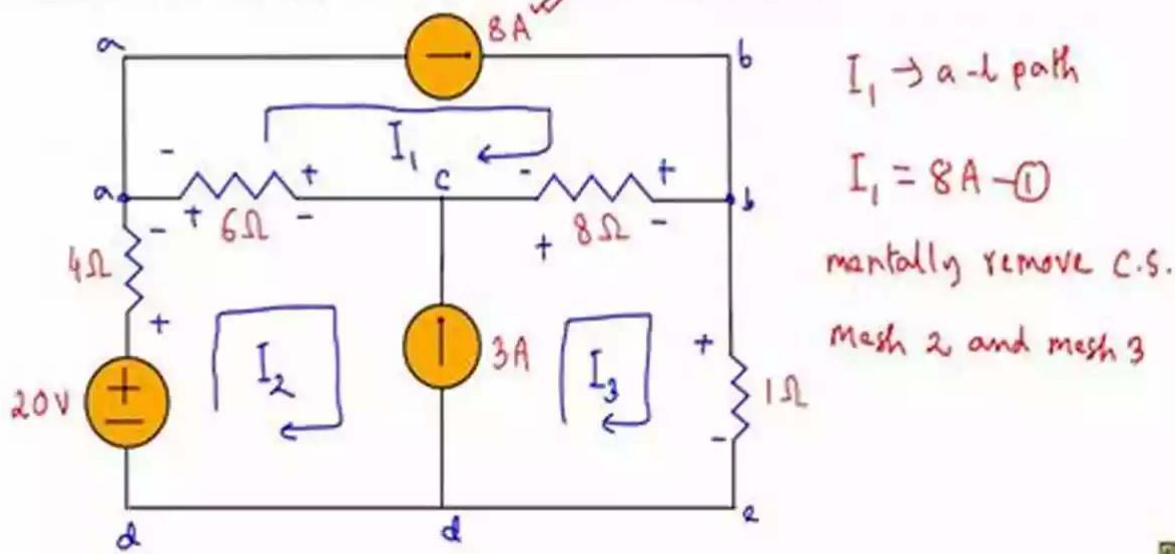
## Problem 2: Determining Force

An object with a mass of 5 kg accelerates at a rate of 2 m/s². Calculate the force exerted by the object.

Supermesh Analysis : Example 2

Using mesh analysis, find the current through 8Ω resistor in the following circuit

8A

I_1

c

$-$ $+$ 6Ω $-$

$+$ 8Ω $-$

4Ω

$+$

I_2

$3A$

I_3

$+$

1Ω

$20V$

a

b

d

d

$I_1 \rightarrow a - l$ path

$I_1 = 8A$ —①

mantally remove C.S.

Mesh 2 and mesh 3
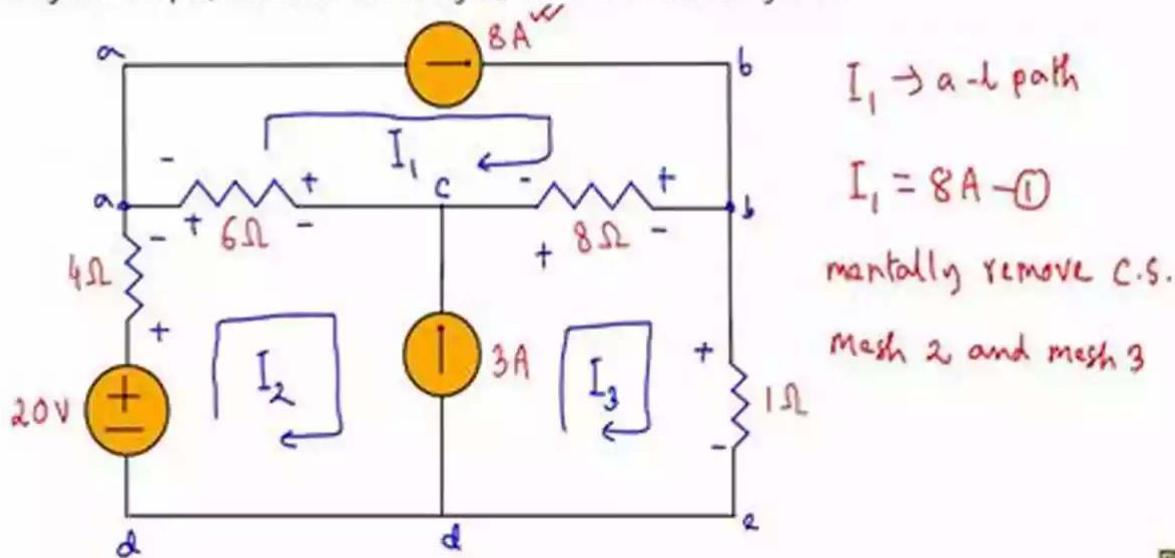
3. Computer Science

Problem-solving is at the core of computer science. Explore the following examples to strengthen your skills in this ever-evolving field.

Problem 1: Sorting Algorithms

Implement the quicksort algorithm to sort an array of integers.

Supermesh Analysis : Example 2

Using mesh analysis, find the current through 8Ω resistor in the following circuit

$I_1 \rightarrow a\text{-}b \text{ path}$

$I_1 = 8A \rightarrow ①$

mantally remove C.S.

Mesh 2 and mesh 3
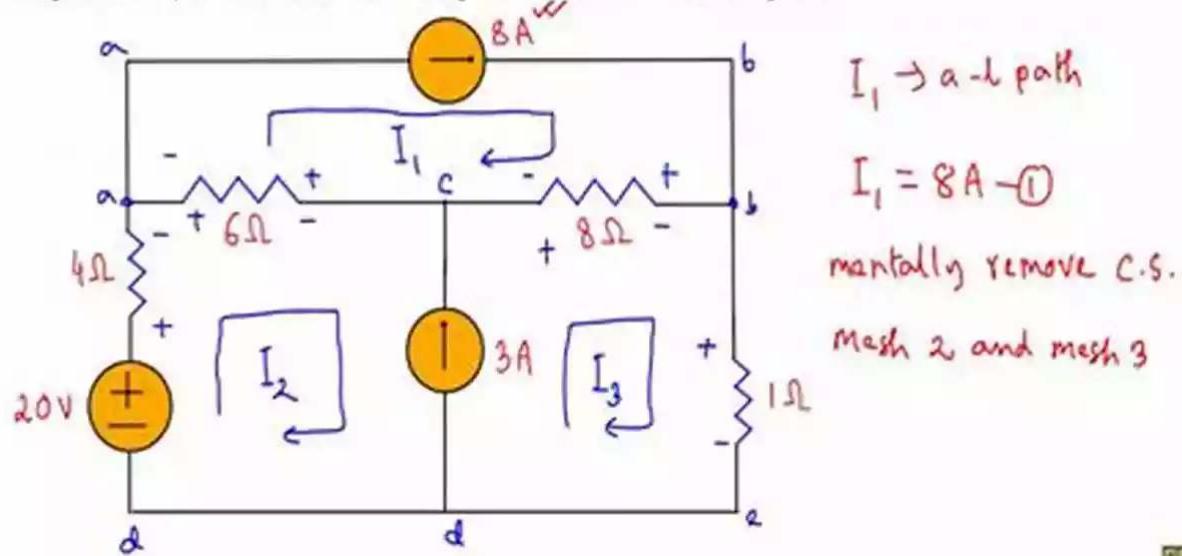
Problem 2: Recursive Functions

Write a recursive function to calculate the factorial of a given number.

Supermesh Analysis : Example 2

Using mesh analysis, find the current through 8Ω resistor in the following circuit

$I_1 \rightarrow a-b$ path

$I_1 = 8A \rightarrow ①$

mentally remove C.S.

mesh 2 and mesh 3
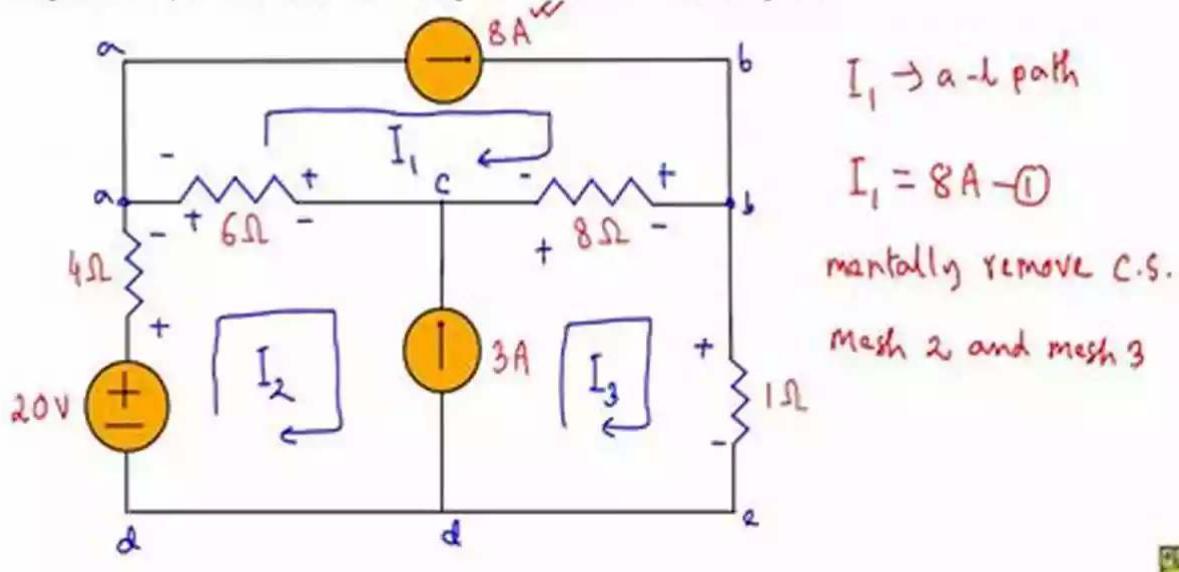
Problem-solving skills are vital for success across various domains. By studying detailed explanation examples and solving a variety of problems, you can improve your analytical thinking and enhance your ability to overcome challenges. The 50 solved problems presented in this article offer valuable insights and practical applications to sharpen your problem-solving skills. So, dive in, practice, and embrace the rewarding journey of problem-solving!

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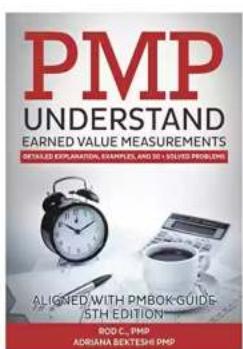
In this book we are explaining the concept of Earned Value and how the other basic concepts are related to each other. We paid attention to trigger out the specifics of using each formula. Each Chapter is associated with good examples which contribute on better understanding of the notions. On the second part of the book are presented questions and exercises regarding Earn Value. Questions are closely modeled on real time exam questions so spend time to study them carefully and you will be able to answer that kind of problems the PMP certificate Exam with ease.
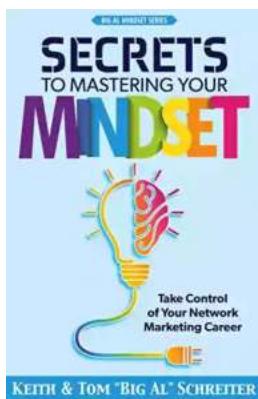
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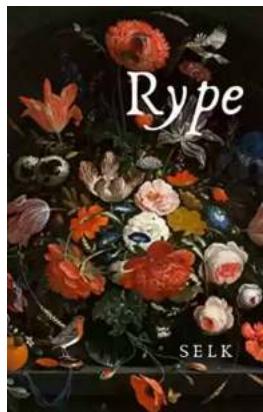
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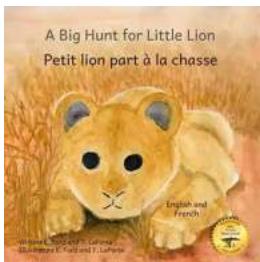
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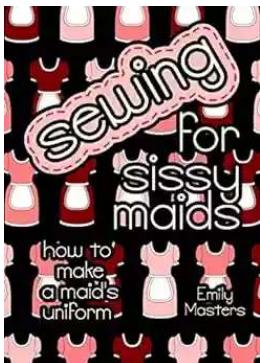
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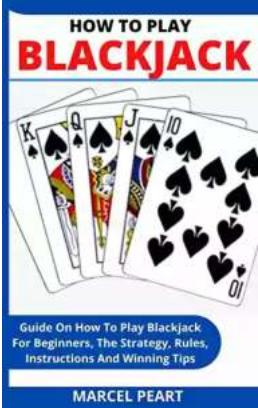
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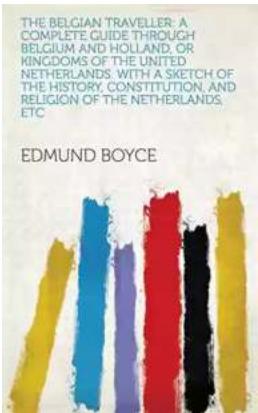
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