



## Apply Probability Concepts in Solving Problems

Achieved	Merit	Excellence
Apply probability concepts in solving problems.	Apply probability concepts, using <u>relational thinking</u> , in solving problems.	Apply probability concepts, using <u>extended abstract thinking</u> , in solving problems.
<u>Relational Thinking</u> - Involves selecting and carrying out a logical sequence of steps, connecting different concepts or representations, demonstrating understanding of concepts, and relating findings to a context.		
<u>Extended Abstract Thinking</u> - Involves devising a strategy, identifying relevant concepts, developing logical reasoning, forming generalizations, and communicating mathematical insight.		

### Probability Concepts

The concepts included in this standard are related to:

- True probability versus model estimates versus experimental estimates
- Randomness
- Independence
- Mutually exclusive events
- Conditional probabilities
- Probability distribution tables and graphs
- Two-way tables
- Probability trees
- Venn diagrams

### Problems

The problems will be set in real-life or statistical contexts and provide opportunities to apply probability knowledge and concepts.

### Key Vocabulary

Students are expected to understand and use terms related to probability, such as:

- |  |   |                                     |
|--|---|-------------------------------------|
| <input type="checkbox"/> Probability       | <input type="checkbox"/> Mutually Exclusive | <input type="checkbox"/> Event      |
| <input type="checkbox"/> Venn diagrams     | <input type="checkbox"/> Conditional        | <input type="checkbox"/> Outcome    |
| <input type="checkbox"/> Probability trees | <input type="checkbox"/> Distribution       | <input type="checkbox"/> Trial      |
| <input type="checkbox"/> Two-way tables    | <input type="checkbox"/> Independence       | <input type="checkbox"/> Randomness |