

MATHEMATICS 30-2

[C] Communication	[PS] Problem Solving
[CN] Connections	[R] Reasoning
[ME] Mental Mathematics and Estimation	[T] Technology
	[V] Visualization

Logical Reasoning	
<p>General Outcome</p> <p>Develop logical reasoning.</p>	<p>Specific Outcomes</p> <p><i>It is expected that students will:</i></p> <ol style="list-style-type: none"> Analyze puzzles and games that involve numerical and logical reasoning, using problem-solving strategies. [CN, ME, PS, R] Solve problems that involve the application of set theory. [CN, PS, R, V] [ICT: C6–2.3]

Probability	
<p>General Outcome</p> <p>Develop critical thinking skills related to uncertainty.</p>	<p>Specific Outcomes</p> <p><i>It is expected that students will:</i></p> <ol style="list-style-type: none"> Interpret and assess the validity of odds and probability statements. [C, CN, ME] Solve problems that involve the probability of mutually exclusive and non-mutually exclusive events. [CN, PS, R, V] [ICT: C6–2.3] Solve problems that involve the probability of two events. [CN, PS, R] Solve problems that involve the fundamental counting principle. [PS, R, V] [ICT: C6–2.3] Solve problems that involve permutations. [ME, PS, R, T, V] Solve problems that involve combinations. [ME, PS, R, T, V]

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Relations and Functions	
<p>General Outcome</p> <p>Develop algebraic and graphical reasoning through the study of relations.</p>	<p>Specific Outcomes</p> <p><i>It is expected that students will:</i></p> <ol style="list-style-type: none"> Determine equivalent forms of rational expressions (limited to numerators and denominators that are monomials and binomials). [C, ME, R] Perform operations on rational expressions (limited to numerators and denominators that are monomials and binomials). [CN, ME, R] Solve problems that involve rational equations (limited to numerators and denominators that are monomials and binomials). [C, CN, PS, R] Demonstrate an understanding of logarithms and the laws of logarithms. [C, CN, ME, R] [ICT: C6–4.1] Solve problems that involve exponential equations. [C, CN, PS, R, T] [ICT: C6–4.1, C6–4.3] Represent data, using exponential and logarithmic functions, to solve problems. [C, CN, PS, T, V] [ICT: C6–4.1, C6–4.3, C6–4.4] Represent data, using polynomial functions (of degree ≤ 3), to solve problems. [C, CN, PS, T, V] [ICT: C6–4.1, C6–4.3, C6–4.4] Represent data, using sinusoidal functions, to solve problems. [C, CN, PS, T, V] [ICT: C6–4.1, C6–4.3, C6–4.4]

Mathematics Research Project	
<p>General Outcome</p> <p>Develop an appreciation of the role of mathematics in society.</p>	<p>Specific Outcomes</p> <p><i>It is expected that students will:</i></p> <ol style="list-style-type: none"> Research and give a presentation on a current event or an area of interest that involves mathematics. [C, CN, ME, PS, R, T, V] [ICT: C1–4.2, C1–4.4, C2–4.1, C3–4.1, C3–4.2, C7–4.2, F2–4.7, P2–4.1]