

THE COGNITIVE LEVELS SKILLS

COGNITIVE LEVELS		DESCRIPTION OF SKILLS TO BE DEMONSTRATED
LEVEL 1	<p>KNOWLEDGE</p> <p>20%</p> <p>(30 marks per paper)</p>	<ul style="list-style-type: none"> • Recall • Identification of correct formula on the information sheet (no changing of the subject) • Use of mathematical facts • Appropriate use of mathematical vocabulary • Algorithms • Estimation and appropriate rounding of numbers
LEVEL 2	<p>ROUTINE PROCEDURES</p> <p>35%</p> <p>(52 - 53 marks per paper)</p>	<ul style="list-style-type: none"> • Proofs of prescribed theorems and derivation of formulae • Perform well-known procedures • Simple applications and calculations which might involve a few steps • Derivation from given information may be involved • Identification and use (after changing the subject) of correct formula • Generally similar to those encountered in class
LEVEL 3	<p>COMPLEX PROCEDURES</p> <p>30%</p> <p>(45 marks per paper)</p>	<ul style="list-style-type: none"> • Problems involve complex calculations and/or higher-order reasoning • There is often not an obvious route to the solution • Problems need not be based on a real-world context • Could involve making significant connections between different representations • Require conceptual understanding • Learners are expected to solve problems by integrating different topics
LEVEL 4	<p>PROBLEM-SOLVING</p> <p>15%</p> <p>(22 - 23 marks per paper)</p>	<ul style="list-style-type: none"> • Non-routine problems (which are not necessarily difficult) • Problems are mainly unfamiliar • Higher-order reasoning and processes are involved • Might require the ability to break the problem down into its constituent parts • Interpreting and extrapolating from solutions obtained by solving problems in unfamiliar contexts