

Question		Marks	
1	1	<p>All marks AO1 (understanding)</p> <p>Simpler for a machine/computer to evaluate (A. easier R. to understand);</p> <p>Simpler to code algorithm;</p> <p>Do not need brackets (to show correct order of evaluation/calculation); A. RPN expressions cannot be ambiguous as BOD</p> <p>Operators appear in the order required for computation; No need for order of precedence of operators;</p> <p>No need to backtrack when evaluating;</p> <p>Max 2</p>	2
1	2	<p>All marks AO1 (understanding)</p> <p>(Starting at LHS of expression) push values/operands on to stack; R. if operators are also pushed onto stack, unless they are immediately popped off the stack</p> <p>Each time operator reached pop top two values off stack (and apply operator to them) // Each time operator reached pop required number of values off stack (and apply operator to them);</p> <p>Push result (of applying operator) to stack;</p> <p>When end of expression is reached the top item of the stack is the result // when end of expression is reached pop one value off the stack;</p> <p>Max 3 if any errors</p> <p>Max 3 if more than one stack used</p> <p>Note for examiners: award 0 marks if description is not about a stack / LIFO structure even if the word "stack" has been used</p>	4

Question		Marks	
2	1	Mark is for AO1 (understanding) Reverse Polish (Notation) // RPN; A. Postfix	1
2	2	All marks AO2 (apply) 523*+4+;; Mark as follows: 1 mark: 23* in expression; 1 mark: correct order of operands with + symbols either side of the 4; Max 1 mark if any errors	2