

8 (a) State the purpose of the optimisation stage in the compilation of a program.

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..... [1]

(b) Convert this Reverse Polish Notation (RPN) back to its original infix form:

$a\ b\ -\ c\ +\ c\ a\ -\ * \ d\ /$

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..... [3]

(c) The RPN expression:

$c\ a\ / \ b\ d\ - \ * \ b\ +$

is to be evaluated, where:

$a = 3, b = 16, c = 9$ and $d = 6$.

Show the changing contents of the stack as the RPN expression is evaluated.

