

## Worksheet: Determinants

NIOS · Class 12 · Mathematics · 3 questions · 13 marks

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_ / 13

**Q1.** Using properties of determinants, prove:  $|a+b, a, a; a, a+b, a; a, a, a+b| = b^2(3a+b)$ . [3 marks]

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**Q2.** Find the inverse of  $A = \begin{bmatrix} 1 & 2 & 1 \\ 3 & 1 & 1 \\ 2 & 0 & 1 \end{bmatrix}$  using cofactors. [4 marks]

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**Q3.** Using the matrix method, solve the system:  $x + 2y + z = 7$ ;  $x + 3z = 11$ ;  $2x - 3y = 1$ . [6 marks]

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