

# Worksheet: Vector Algebra

IGCSE · Class 12 · Mathematics · 3 questions · 12 marks

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| Name: _____ | Date: _____ | Score: _____ / 12 |
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**Q1.** Find the angle between  $\mathbf{a} = 2\hat{i} - 5\hat{j} + \mathbf{k}$  and  $\mathbf{b} = \hat{i} + 52\mathbf{k}$ . *[3 marks]*

**Q2.** Find the area of a triangle with vertices A(1, 2, 3), B(2, 1, 4), C(4, 5, 1). *[4 marks]*

**Q3.** Show that vectors  $\mathbf{a} = \hat{i} - 25 + 3\mathbf{k}$ ,  $\mathbf{b} = 2\hat{i} + 354\mathbf{k}$ ,  $\mathbf{c} = \hat{i} - 35 + 5\mathbf{k}$  are coplanar. *[5 marks]*