

## Worksheet: Vector Algebra

Maharashtra State Board · Class 12 · Mathematics · 3 questions · 12 marks

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

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

Score: \_\_\_\_\_ / 12

**Q1.** Find the angle between  $a\hat{x} + 2\hat{y} + 5\hat{k}$  and  $b\hat{x} + \hat{y} + 52\hat{k}$ . [3 marks]

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

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**Q3.** Show that vectors  $a\hat{x} + 2\hat{y} + 3\hat{k}$ ,  $b\hat{x} + 2\hat{y} + 354\hat{k}$ ,  $c\hat{x} + \hat{y} + 35 + 5\hat{k}$  are coplanar. [5 marks]

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