

FURTHER EXAMPLES INVOLVING DISCRIMINANTS

- 1 Find the values of k for which the following quadratic equations have: (i) one root (ii) two roots.
- (a) $x^2 - 3x + k = 0$ (b) $x^2 + kx + 3 = 0$

- 3 For what values of m does the quadratic equation $(5m - 3)x^2 - 4mx + m + 1 = 0$ have only one root?

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10 For what values of m does the equation $x^2 - 2mx + 8m - 15 = 0$ have: (a) one root (b) two roots?