1. Converting intercept form *(ax + b)(cx + d)* of a quadratic to a standard form involves multiplying every term of the first factor by every term of the second.
2. Product of the coefficients of the *x^2 term* and the constant term is *abcd*. Similarly, product of the coefficients of both *x terms* is *abcd*. Also, sum of the two middle terms is ad + bc.
3. To convert standard form to intercept form, we use the above fact, and split the middle term. Rearrange the terms.
4. Another technique to solve quadratic equation is by completing the square.
5. Yet another technique uses quadratic formula.
6. b^2 – 4ac is called the determinant, since it decides whether the two roots are real, imaginary, or equal. If determinant is 0, then the roots are equal; if less than zero, roots are imaginary, else they're real and distinct. Further, if the determinant is perfect square, the roots are rational. Else, the roots are irrational.