Quadratic Relations

Laws + Formulas

Standard Form - y=ax2+bx+c

> Ex.

Vertex Form - y=a(x−h)2 +k

> Ex.

Factored Form - ax 2 +bx+c=a(x−p)(x−q)

> Ex.

Axis of Symmetry - x= −b± b2-4ac / 2a

> Ex.

Axis of Symmetry - x = -b / 2a

> Ex.

Factoring

Laws + Formulas

Factoring an Expression - ax2+bx+c=(px+q)(rx+s)

> Ex.

Difference of Squares - a2- b2= (a-b)(a+b)

> Ex.

Perfect Squares - a2+2ab+b2=(a+b)2

> Ex.

Factor by Grouping - When expression has 4 terms, group into pairs, factor out GCF, then factor out common binomial.

> Ex.

Trigonometry

Laws + Formulas

Trig Ratios

Sine (SOH) - sinθ = opposite / hypotenuse

> Ex.

Cosine (CAH) - cosθ = adjacent/ hypotenuse

> Ex.

Tangent (TOA) - sinθ = adjacent/opposite

> Ex.

Sine Law

Solving for Angle - sin A/a = sin B/b = sin C /c

> Ex.

Solving for Side - a /sin A = b /sinB= c/sinC

> Ex.

Cosine Law

Solving for Angle - cosA = b2+c2-a2 / 2bc

> Ex.

Solving for Side - a2 = b2+c2-2bc cosA

> Ex.

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Explanation

Standard Form :

Vertex Form :

Factored Form :

Axis of Symmetry :

Axis of Symmetry :

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Explanation