

# Web Demo and Topics

## Math B Questions

- 1) What is the third term in the expansion of  $(2x - y)^4$ ?
- 1)  $-16x^3y$                       2)  $16x^3y$                       3)  $-24x^2y^3$                       4)  $24x^2y^2$
- 2) The vertices of quadrilateral ABCD are A(-1,1), B(4,5), C(9,1), and D(4,-3). Using coordinate geometry prove that
- a) ABCD is a rhombus  
b) ABCD is not a square
- 3) Two equal forces act on a body at an angle of  $80^\circ$ . If the resultant force is 100 newtons, find the value of one of the two equal forces, to the nearest hundredth of a newton.
- 1) 65.27    3) -78.12  
2) -147.15    4) -132.78
- 4) In the equation  $y = 0.5(1.21^x)$ , y represents the number of snowboarders in millions and x represents the number of years since 1988. Find the year in which the number of snowboarders will be 10 million for the first time. (only an algebraic solution will be accepted.)
- 1) 1008                      2) 2004                      3) 1016                      4) 1210
- 5) In the equation  $ax^2 + 6x - 9 = 0$ , imaginary roots will be generated if
- 1)  $-1 < a < 1$     3)  $a > -1$ , only  
2)  $a < 1$ , only    4)  $a < -1$

## MATH B TOPICS

Absolute Measure  
Circle Geometry  
Algebraic Operations  
Altitude to Hypotenuse of Right Triangle  
Area - Parallelogram  
Area - Rectangle  
Area - Rhombus  
Area - PROBABILITY  
Area - Triangle  
Binomial Expansion  
Circles - Equation of Complementary Angles  
Complementary Angles  
Correlation - Modeling - Prediction  
Coordinate Geometry - Circle  
Deductive Proofs  
Double Angle formula  
Ellipse

Logic - Proofs  
Logic - Truth Values  
Mean Proportional  
Parabolas  
Parallel Lines  
Percent  
Permutations & Arrangements  
Pythagorean Theorem  
Properties of Number Systems  
Proving Identities  
Quadratic Equations - Word Problems  
Quadrants  
Quadratic Equations  
Quadratic Equations - Factoring  
Quadratic Equations - Formula  
Quadratic Equations - Solving

Exponential Functions - Equation Solving  
 Exponential Functions - Graphing  
 Exponents  
 Finite Mathematical Systems  
 Formulas  
 Fractions  
 Functions - Graphs  
 Functions of sum & Difference  
 Functions: Notation - Inverse - Domain - Range  
 Geometric Proofs  
 Graphs Trigonometric Functions/Amplitude & Period  
 Half Angle Formula  
 Imaginary & Complex Numbers  
 Inequalities - Algebraic Solutions  
 Inequalities - Graphic Solutions  
 Inequalities of Triangles  
 Interpolation  
 Intersecting Chords  
 Inverse Trigonometric Functions & Composition  
 Inverse Variations and Hyperbola  
 Laws of Sines & Cosines  
 Line Joining Midpoints of Two Sides  
 Line Parallel to one Side of a Triangle  
 Linear equations  
 Linear Functions & Graphs - Eqs. of  
 Linear Functions & Graphs - Slope  
 Linear Functions & Graphs -  $y = mx + b$   
 Logarithms - Calculations  
 Logarithms - Equations  
 Logarithms - Graphing  
 Trig. Functions: Evaluate/Expressing/Acute angle  
 Vertical Angles

Quadrilateral Properties - Parallelogram  
 Quadrilateral Properties - Rectangle  
 Quadrilateral Properties - Rhombus  
 Quadrilateral Properties - Trapezoid  
 Radian Measure  
 Radical Equations  
 Radicals  
 Relations Between Tangent and Secant  
 Similar Figures - Ratio & Proportions  
 Simplifying Trigonometric Expressions  
 Statistics  
 Summation - Sigma Notation  
 Supplementary Angles  
 Symmetry  
 Systems of Equations  
 System of Equations - Alg. solutions  
 System of Equations - Graphic solutions  
 Transformations  
 Triangle Properties - Equilateral  
 Triangle Properties - Exterior Angles  
 Triangle Properties - Isosceles  
 Triangle Properties - Measure of sides  
 Triangle Properties - Sum of angles  
 Trig. Applications - Area  
 Trig. Applications - Right Triangle  
 Trig. Equations