

IB Math Studies Vacation Work (January 2015)

Your task is to review (and master) a few topics before we return to school. Most of these topics come from the prior learning topics of your course syllabus. You will have a quiz over these topics our 1st day of class in the new semester. Do what you need to in order to learn the content. Everything I include below are suggestions from Khan Academy skills of what you COULD do in order to learn and practice the content. You could choose to do all of it or none of it or just some of it - that is up to you! Also, feel free to seek out other resources that practice the same skills. What matters is that you know all of these skills before the new semester begins!

- Simple applications of ratio, percentage and proportion
 - representing ratios
 - ratio word problems
 - solving ratio problems with tables
 - rate problems 0.5
 - writing proportions
 - proportions 1
 - proportions 2
 - constructing proportions to solve application problems
 - rate problems 2
 - finding percents
 - percentage word problems 1
- Basic manipulation of simple algebraic expressions, including factorization and expansion
 - factoring linear binomials
 - multiplying binomials 1
 - multiplying binomials 2
 - factoring quadratics 1
 - factoring quadratics 2
 - factoring difference of squares 1
 - factoring difference of squares 2
 - solving quadratics by factoring
 - solving quadratics by factoring 2
- Rearranging formulae
 - solving equations in terms of a variable
 - manipulating formulas
- Evaluating expressions by substitution

- evaluating expressions in one variable
- evaluating expressions in 2 variables
- evaluating expressions with variables word problems
- equivalent forms of expressions 1
- Evaluating exponential expressions with integer values
 - order of operations
 - evaluating expressions with exponents
 - evaluating exponent expressions word problems
- Perimeter and area of circles, triangles, quadrilaterals and compound shapes
 - area of triangles
 - area of triangles 2
 - shaded areas
 - radius, diameter, and circumference
 - area of a circle
 - area of parallelograms
 - area of trapezoids, rhombi, and kites
 - area of quadrilaterals and polygons
- The collection of data and its representation in bar charts, pie charts and pictograms
 - reading stem and leaf plots
 - reading pictographs 1
 - reading pictographs 2
 - reading bar charts 1
 - creating bar charts
 - reading bar charts 2
 - reading bar charts 3
- Find measures of central tendency: mean, median and mode
 - mean, median, and mode
 - exploring mean and median
 - interpreting and comparing data distributions
 - average word problems