Hillel Academy High School

Grade 7
Mathematics
End of Year Study Guide
September 2013- June 2014

Examination	Date
The exam consists of *2 papers*: Paper 1: Short Response 1 hour 30 minutes *No Calculators Allowed* Paper 2: Structured Response 2 hours *No Calculators Allowed*	June 2014

Materials Needed

- Pens
- Pencils
- Eraser
- Compass
- Protractor
- 30 cm ruler.

How to study:

- ✓ Start now! Do not wait until exam week!
- ✓ Plan your study time systematically. Set aside at least 40 minutes every day to revise and practice mathematics.

- ✓ Read the notes in your text book and practice some of the *'Test Yourself'* questions at the end of each chapter. (The answers are on pages 456- 492 of MYP, so that you can check that what you are doing is right.)
- ✓ Make sure that you understand and can apply all mathematical vocabulary.

- ✓ Remember that the showing of all working is very important. Many of the questions will be worth more than one mark. ***You will only be awarded full marks if all your work is set out clearly and ALL work is shown.***
- ✓ Use your own exercise book(s) to help you revise. Go over your own work. Look at the mistakes you have made. Do you know how to do this work correctly now? If not, ask your teacher for help.

Units	Course Content	MYP Page Reference
INTEGERS, POWERS, AND ROOTS	 ○ Adding, subtracting, multiplying and dividing negative numbers ○ Adding, subtracting, multiplying and dividing negative numbers with fractions ○ Classifying numbers: Real, Rational, Irrational, Integer etc… ○ Write a number in terms of its prime factors using index notation. ○ Find the HCF and LCM using prime factors. ○ Calculate the negative square roots, cubes and cube roots; use the notation $\sqrt[3]{64}$ and index notation for positive integer powers. ○ Divisibility Tests	See notes/ Worksheets & Chapter 1 Pages 11- 29 Chapter 3 Pages 58 - 73
ALGEBRA	○ Simplify algebraic expressions using the order of operations- including brackets and exponents. ○ Form expression and simple formulae from worded questions ○ Simplify, using the distributive property, a single term over a bracket, i.e. ○ Solve linear equations and formulae including algebraic fractions. ○ Construct and solve linear equations from worded ○ Solving one step, two step and multi-step equations with distributive property ○ Solving worded questions including money, geometry and consecutive numbers	See notes, Worksheets Chapter 5 Pages 104 - 106 & Chapter 8 Pages 157-170
Ratio, Proportion & Percent	○ Calculate and solve problems involving percentages or quantities. ○ Find the percentage increase and decrease. ○ Calculate original amount ○ Calculate simple interest. ○ Solve real life problems involving percentages and simple interest.	See notes, Worksheets Chapter 7 & Chapter 12 Pages 234 -246
Geometry, Lines & Angles	○ Classifying angles and polygons ○ Measuring angles and drawing triangles ○ Constructing angles (90^0 , 60^0, 45^0, 30^0) and bisecting angles ○ Understand the difference between drawing and constructing ○ Identify alternate, corresponding, and co-interior angles made with transversal and parallel lines. ○ Solve geometrical problems using properties of angles, or parallel and intersecting lines, and of triangles and special quadrilaterals – explaining reasoning with diagrams. ○ Find the sum of interior angles regular polygons. ○ Find the size of each interior angles of regular polygons.	See notes, Worksheets & Chapter 14 Pages 274-291 & Chapter 2 Pages 32 - 53
COORDINATE GEOMETRY	○ Recognise and draw the equations of lines in the form $y = mx + c$ ○ Write equations of straight line graphs –slope intercept form. ○ Recognise and draw the equation a vertical and a horizontal line ○ Interpret distance time graphs.	See notes & Worksheet
MEASUREMENT	○ Calculate metric conversions, Area measures and volume measures ○ Finding the perimeter, area of Triangles and quadrilaterals ○ Derive and use the formulae for the area of parallelograms & trapeziums. ○ Name the parts of a circle; know and use the formulae for the circumference and area of a circle. ○ Calculate perimeter and area of compound 2D shapes. ○ Use geometric reasoning to find missing measurements. ○ Determine the surface area and volume of 3D prisms ○ Drawing the Nets of Prisms ○ Capacity ○ Time Conversions	See notes & Chapter 9 Page 176 – 193 & Chapter 11 Pages 212 – 228 & Chapter 18 Pages 352 - 362

	Please use all worksheets and notes provided in class.	

Here is a checklist for your studying

Topics	Done
Integers, Powers & Roots	
Algebra	
Ratio, Proportion & Percent	
Geometry, Lines & Angles	
Coordinate Geometry	
Measurement