

	RED	YELLOW	GREEN
<u><i>Unit 1 - Linear Relations & Linear Systems</i></u>			
<p>Gradient (or slope)</p> <ul style="list-style-type: none"> • Be able to calculate the slope of a line from a graph. • Be able to calculate the slope using the formula for slope • Be able to use slope to determine if lines are parallel, perpendicular or neither • Be able to interpret the meaning of slope when linear relations are used in word problems & modeling scenarios <p>Equations of Straight Lines</p> <ul style="list-style-type: none"> • Given two points, be able to write an equation of the line passing through them. • Given the graph of a line, be able to write the corresponding equation • Be able to write equations in slope-intercept, standard or point-slope form. • Be able to convert equations from one form to another: slope-intercept, standard or point-slope form. • Be able to write equations of lines when linear relations are used in word problems & modeling scenarios <p>Graph Lines</p> <ul style="list-style-type: none"> • Be able to graph a line from data table or a table of values or from an equation presented in slope-intercept & standard form. • Be able to graph a line using the x and y-intercepts. • Be able to graph lines when linear relations are used in word problems & modeling scenarios <p>Special Lines: Vertical and Horizontal Lines, Parallel & Perpendicular</p> <ul style="list-style-type: none"> • Know the slope for horizontal and vertical lines. • Be able to write the equations of horizontal and vertical lines. • Given the equation of one line, be able to write an equation for a second line that is either parallel or perpendicular to the given line. <p>Graphing Systems of Equations</p> <ul style="list-style-type: none"> • Be able to graphically solve a system of linear equations using a calculator. • Be able to graphically solve a system of linear equations without a calculator. <p>Algebraic Solutions to Linear Systems</p> <ul style="list-style-type: none"> • Be able to solve a system of linear equations using the substitution method. • Be able to solve a system of linear equations using the elimination method. • Be able to choose an appropriate method to solve a system of equations. <p>Modeling with Systems of Linear Equations</p> <ul style="list-style-type: none"> • Be able to also write a system of equations to represent a situation. You should then be able to solve that system using graphing, substitution, or elimination. • Be able to identify whether a system has zero, one or an infinite number of solutions. 			

<p style="text-align: center;"><u>Unit 2 - Coordinate Geometry</u></p> <p>Basic Calculations:</p> <ul style="list-style-type: none"> • Be able to use the formulas for slope, length & midpoint in geometric applications & real world contexts. • Be able to use the formula for the equation of a circle centered at (0,0) as well as (h,k) in geometric applications & real world contexts. • Be able to work with geometric shapes used in representations of real-world situations (i.e. areas & perimeters). <p>Geometric Shapes:</p> <ul style="list-style-type: none"> • Be able to classify triangles & quadrilaterals types using slopes & lengths. • Be able to use length and slope calculations to classify quadrilateral types • Be able to determine slopes and equations of perpendicular bisectors • Be able to draw triangles & quadrilaterals using coordinates via sketches, graphs • Be able to use slope to determine whether or not right angles are present in geometric figures • Be able to work through simple proofs of geometric properties of quadrilaterals, triangles & circles using the general "template" • Examples of geometric properties to be "proven" would involve mid-segments, diagonals, perpendicular bisectors, triangle centers, altitudes of triangles, & some simple circle theorems involving chords. 			
<p style="text-align: center;"><u>Unit 3 - Right Triangle Trigonometry</u></p> <p>Basics of Trig Ratios</p> <ul style="list-style-type: none"> • Be able to find the sine, cosine & tangent ratios for an angle using the ratio of appropriate sides lengths in a right triangle • Given an angle measure, be able to use your calculator to find a decimal value for the sine, cosine & tangent ratios. • Given a sine, cosine & tangent ratio, be able to use your calculator to find a value for the angle. <p>Solving for Sides & Angles in Triangles</p> <ul style="list-style-type: none"> • Given an angle and the length of a side in a right triangle, be able to find the length of a second side using the appropriate trig ratio (sine, cosine or tangent.) • Given the lengths of any 2 sides in a right triangle, be able to find the measure of angles using the appropriate trig ratio (sine, cosine or tangent.) <p>Applications</p> <ul style="list-style-type: none"> • Be able to determine when to use each of the trig ratios (sin, cos, or tan). • Be able to work with the terms angle of elevation and angle of depression. • Be able to solve word problems wherein triangles can be used to model the problem by drawing a well labeled diagram and using trig ratios 			

Linear Equations and Linear Systems Units:

1. Open the [Nelson Review link](#) and work through the first 2 pages (pages 250-251 → ANS are on pages 3,4). The following questions are **SUGGESTED: Q4,6,7,10ac,11,12ac,13,15a,16**
2. Continue on [the Nelson Review link](#) and work through the first 2 pages (pages 250-251 → ANS are on pages 3,4). The following questions are **SUGGESTED: Q8,9,10bd,12ab,15bc,17**
3. Open the [Nelson Review link](#) and work through pages 5&6 (pages 309,310 → ANS are on page 7) . The following questions are **SUGGESTED: Q1ad,4ad,5,6,7ac,10,11cd,13bcd,14ab**
4. Continue on the [Nelson Review link](#) and work through pages 5&6 (pages 309,310 → ANS are on page 7). The following questions are **SUGGESTED: Q4bc,11ae,12,13ae**
5. Open the [Nelson Review link](#) and work through page 8 (pages 137 → NO ANS to this TEST). The following questions are **SUGGESTED: Q1,2ac,3bc,4,5,7**

Co-ordinate Geometry Unit

6. From Regents TEST Prep → [Coordinate Geometry WS #1](#)
7. From Regents TEST Prep → [Coordinate Geometry WS #2](#)
8. From Regents TEST Prep → [Working with Circles WS #3](#)
9. Midpoint Formula → <http://www.kutasoftware.com/FreeWorksheets/GeoWorksheets/3-The%20Midpoint%20Formula.pdf>
10. Distance Formula → <http://www.kutasoftware.com/FreeWorksheets/GeoWorksheets/3-The%20Distance%20Formula.pdf>

Trigonometry Unit:

11. Open the [Nelson 10 Chapter 7.4 link](#) and work through the final 2 pages (pages 398-399 → ANS are linked below). The following questions are **SUGGESTED: Q5,6,8, 12,13,17**
12. Continue on [the Nelson Chapter 7.5 link](#) and work through the final 2 pages (pages 404-406 → ANS are linked below). The following questions are **SUGGESTED: Q4,7,9, 11,12,16**
13. Open the [Nelson Chapter 7.6 link](#) and work through the final 2 pages (pages 413-414 → ANS are linked below). The following questions are **SUGGESTED: Q8,14,16,17,19**
14. Continue on the [Nelson Chapter 7 Review link](#) and work through the final 2 pages (pages 416-417 → ANS are linked below). The following questions are **SUGGESTED: Q5-17**
15. Open the [Nelson Chapter 7 Answers link](#) and work through page 8 (pages 137 → NO ANS to this TEST). The following questions are **REQUIRED: Q1,2ac,3bc,4,5,7**

Tests & Quizzes from Previous Courses & from our Course

16. [Linear Equations Test](#) from ISM Oct 2011
17. [Another Linear Equations Test](#) from ISM, 2012
18. [Linear Relations Quiz](#) from ISM
19. [Linear Systems QUIZ](#) from ISM
20. [Right Triangle Trigonometry QUIZ](#) from ISM
21. [CAC Unit 1 Linear Relations Quiz](#) from Sept 2013 and the [CAC Unit 1 IM2 QUIZ](#) from Aug 2014
22. [CAC Unit 1 IM2 TEST](#) from Sept 2013 and the [CAC Unit 1 IM2 TEST](#) from Sep 2014
23. [CAC Unit 2 IM2 QUIZ](#) from Oct 2013
24. [CAC Unit 2 IM2 TEST](#) from Nov 2013 and the [CAC Unit 2 IM2 TEST](#) from Nov 2014

Video Links:

(A) Linear Relations

Slope of a Line → <http://www.onlinemathlearning.com/slope-of-a-line.html>

Equation of a Line → <http://www.onlinemathlearning.com/equation-of-line.html>

Forms of Linear Equations → <http://www.onlinemathlearning.com/forms-linear-equations.html>

Graphing Linear Equations → <http://www.onlinemathlearning.com/graphing-linear-equations.html>

Writing Equations of Lines from 2 points → <http://www.onlinemathlearning.com/straight-line-equation.html>

Writing Equations of Lines → <http://www.onlinemathlearning.com/equation-of-a-line.html>

Equations of Horizontal & Vertical Lines → <http://www.onlinemathlearning.com/graph-an-equation.html>

Working with Parallel & Perpendicular Lines → <http://www.onlinemathlearning.com/parallel-lines.html>

Applications of Linear Equations → <http://www.onlinemathlearning.com/algebra-lessons-7.html> (Watch the 4th video (Lesson 18b))

(B) Linear Systems

Solve Systems Graphically → <http://www.onlinemathlearning.com/systems-of-equations.html>

Solve by Elimination → <http://www.onlinemathlearning.com/algebra-tutorial-addition.html>

Solve by Substitution → <http://www.onlinemathlearning.com/algebra-lesson-substitution.html>

Special Types of Systems → <https://www.khanacademy.org/math/algebra/systems-of-eq-and-ineq/fast-systems-of-equations/v/special-types-of-linear-systems>

(C) Trigonometry Videos

Solving for sides in right triangles → <http://www.onlinemathlearning.com/trigonometry-side.html>

Solving for sides in right triangles → <http://www.onlinemathlearning.com/trigonometry-side-2.html>

Solving for angles in right triangles → <http://www.onlinemathlearning.com/inverse-trigonometric.html>

Solving for angles in right triangles → <http://www.onlinemathlearning.com/inverse-trigonometric2.html>

Solving word problems using right triangles → <http://www.onlinemathlearning.com/trigonometry-problems.html>

Solving word problems using right triangles → <http://www.onlinemathlearning.com/trig-word-problems.html>