

Can I....?

**FPC 10 Concept List (Fall 2018)** Name: \_\_\_\_\_ PERIOD: \_\_\_\_\_ ASSIGNED # \_\_\_\_\_

Topic 1 – Factoring Numbers-Chapter 3 (3.1-3.2) (Outcome FP 10.1) <span style="float: right;">NC = NO CALCULATOR C= Calculator Allowed</span>				
Concept #	Concept Description	1	2	3
1	3.1 Determine the greatest common factor of whole numbers using prime factorization ( NC) (Skill)			
2	3.1 Determine the least common multiple of whole numbers using prime factorization ( NC) (Skill)			
3	3.2 Determine and explain if a whole number is a perfect square or perfect cube and determine its square root or Cube root ( NC) (Skill)			
4	3.1/3.2 Solve problems that involve prime factors, greatest common factors, least common multiples, square roots or cube roots (NC) (Problem Solving)			
<b>Topic 2 – Exponents and Irrational Numbers – Chapter 4 (Outcome FP 10.2)</b>				
5	4.2 Classify and order numbers – sort a set of numbers into rational and irrational numbers and describe which subsets of Real numbers it belongs to: natural, whole, integers, rational, irrational and order them on a number line (NC) (Skill)			
6	4.3 Write a radical as a mixed radical in simplest form and mixed radical as an entire radical (NC) (Skill)			
7	4.4 Express powers with rational exponents as radicals and vice versa ( NC) (Skill)			
8	4.5 Evaluate powers with negative integer exponents, negative rational exponents, an exponent of zero ( NC) (Skill)			
9	4.6 Simplify expressions by applying the exponent laws ( including expressions variable bases) (NC) (Skill)			
<b>Topic 3 –Measurement– Chapter 1 (Outcome FP 10.3)</b>				
10	1.1/1.3 Correctly convert from imperial to SI or SI to imperial (linear measurements) (C) (Skill & Problem Solving)			
11	1.4 / 1.7 Determine the surface area of 3D objects (right cones, cylinders, prisms, pyramids & sphere’s) (C) (Skill & Problem Solving)			
12	1.5/1.7 Determine the volume of 3D objects (right cones, cylinders, prisms, pyramids & sphere’s) (C) (Skill & Problem Solving)			
13	1.6 Determine the surface area and volume of and composite objects (C) (Skill & Problem Solving)			
<b>Comprehensive Test #1: Topics 1,2,3 Estimated date beginning of October</b>				
<b>Topic 4 – Trigonometric Ratios – Chapter 2 (Outcome FP 10.4)</b>				
14	2.1/2.4 Correctly set up the primary trigonometric ratios (sin, cos, tan) for acute angles in right triangles (C)(Skill & Problem Solving)			
15	2.1/2.4 Correctly solve for an acute angle measure in a right triangle using the primary trig ratios (C) (Skill & Problem Solving)			
16	2.2/2.5 Correctly solve for a side length in a right triangle (using primary trig ratios and/or the Pythagorean Theorem) & solving entire triangles (C)(Skill & Problem Solving)			
17	2.7 Solve problems involving one or more than one right triangle (C) (Skill & Problem Solving)			
<b>Topic 5 – Polynomials (Multiplying &amp; Factoring) – Chapter 3 (3.3-3.8) (Outcome FP 10.5)</b>				
18	3.5/3.6 Correctly multiply two binomials (NC) (Skill)			
19	3.7 Correctly multiply a binomial by a trinomial and a trinomial by a trinomial (NC)(Skill)			
20	3.5 Correctly factor trinomials that may have a GCF and then factor the resulting trinomial that will be the form $x^2 + bx + c$ by method of choice (NC) (Skill)			
21	3.6 Correctly factor a trinomial that may have a GCF and then factor the resulting trinomial that will be the form $ax^2 + bx + c$ , where $a > 1$ by method of choice (NC) (Skill)			
22	3.8 Factoring using GCF and/or all of the above (including perfect square trinomials, trinomials in two variables, difference of squares) (NC)(Skill)			

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<b>Topic 6 – Relations vs. Functions – Chapter 5 (5.1-5.5) (FP 10.6)</b>				
23	5.1/5.2/5.5 Be able to express relationships in a variety of ways & correctly identify whether that relationship is a function or not with justification <b>(NC)(Skill)</b>			
24	5.2 Be able to change between function notation and equations in two variables and how to use function notation to find values <b>(NC)(Skill)</b>			
25	5.2/5.5 Correctly determine the domain and range of linear & non-linear relations using interval notation, set notation or lists <b>(NC)(Skill)</b>			
26	5.3/5.4 Sketch a graph to represent a situation, interpret a given situation, be able to identify the independent and dependent variables and determine if the data points should or should not be connected on the graph (discrete or continuous) <b>(NC) (Skill &amp; Problem Solving)</b>			
<b>Comprehensive Test #2: Topics 4,5,6 ( Estimated date Mid November)</b>				
<b>Topic 7 – Slope &amp; Linear Relations – Chapters ( 5.2, 5.5, 5.6, 5.7, 6.1.2) (Outcome FP 10.7 &amp; 10.8)</b>				
27	6.1 Correctly determine the slope of a line or line segment using the graph or the formula when given two points, explain the meaning of zero or undefined slopes, draw a line given its slope and a point on the line <b>(NC) (Skill)</b>			
28	5.7 Understand and determine the rate of change of a linear relation <b>(NC) (Skill &amp; Problem Solving)</b>			
29	5.7 Determine and interpret the intercepts of a linear function given the graph or the equation <b>(NC) (Skill &amp; Problem Solving)</b>			
30	6.2 Determine whether two lines are parallel or perpendicular <b>(NC) (Skill &amp; Problem Solving)</b>			
<b>Topic 8 – Equations of Lines – Chapter 6.4-6.6 (Outcome 10.8 &amp; 10.9)</b>				
31	6.4 Write the equation of a linear function in <b>slope-intercept form</b> (either from given info or from a graph). Given an equation in <b>slope-intercept form</b> be able to identify the values of slope and y intercept. Graph an equation given in <b>slope-intercept form</b> . <b>(NC)(Skill)</b>			
32	6.5 Write an equation of a line in <b>point-slope form</b> (either from given info or from a graph). Given an equation in <b>point-slope form</b> be able to identify the values of slope and one point and graph it. Graph a linear function given its equation in <b>point-slope form</b> <b>(NC)(Skill)</b>			
33	6.5 Write an equation (in more than one form) of a line given two points on the line <b>(NC)(Skill)</b>			
34	6.6 Rewrite an equation in general form $ax + by + c = 0$ and graph a line in general form (using intercept and slope-intercept method) <b>(NC)(Skill)</b>			
35	6.5 Write an equation of a line that is parallel or perpendicular to a given line <b>(NC)(Skill)</b>			
36	6.4 Use an <b>equation of a linear function</b> to solve a situational problem <b>(NC) (Skill &amp; Problem Solving)</b>			
<b>Topic 9– Systems of Linear Relations – Chapter 7 (Outcome 10.10)</b>				
37	7.2 Solve a system <b>graphically, with/without technology</b> , and verify the solutions <b>(C) and (NC)(Skill)</b>			
38	7.4 Solve a system <b>algebraically</b> using <b>substitution and/or elimination</b> verify the solutions <b>(C)(Skill)</b>			
39	Create a linear system to model a situation & solve <b>(C) (Skill &amp; Problem Solving)</b>			
40	7.6 Determine the number of solutions for a linear system <b>(C)(Skill)</b>			
<b>Comprehensive Test #3: including Topics 7,8,9 (estimated date: mid-January)</b>				
<b>Final Exam including Topics 1-9 (date TBD 😊)</b>				