

Can I....?

FPC 10 Concept List (Fall 2019) Name: _____ PERIOD: _____ ASSIGNED # _____

Topic 1 – Factoring Numbers-Chapter 3 (3.1-3.2) (Outcome FP 10.1)		NC = NO CALCULATOR C= Calculator Allowed	
Concept #	Concept Description	1	2
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)		
Topic 2 – Exponents and Irrational Numbers – Chapter 4 (Outcome FP 10.2)			
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)		
Topic 3 –Measurement– Chapter 1 (Outcome FP 10.3)			
10	1.1/1.3 Correctly convert from imperial to SI or SI to imperial (linear measurements) (C) (Skill & Problem Solving)		
11	1.4 - 1.6 Determine the surface area of 3D objects (right cones, cylinders, prisms, pyramids & sphere’s) (C) (Skill & Problem Solving)		
12	1.5 - 1.6 Determine the volume of 3D objects (right cones, cylinders, prisms, pyramids & sphere’s) (C) (Skill & Problem Solving)		
13	1.7 Determine the surface area and volume of and composite objects (C) (Skill & Problem Solving)		
Comprehensive Test #1: Topics 1,2,3 Estimated date middle of October			
Topic 4 – Trigonometric Ratios – Chapter 2 (Outcome FP 10.4)			
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	2.6 & 2.7 Solve problems involving one or more than one right triangle (C) (Skill & Problem Solving)		
Topic 5 – Polynomials (Multiplying & Factoring) – Chapter 3 (3.3-3.8) (Outcome FP 10.5)			
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	3.3 Correctly factor polynomials with a GCF (NC)(Skill)		
21	3.5 Factor trinomials with an initial GCF resulting in the form $x^2 + bx + c$ (by method of choice) (NC) (Skill)		
22	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)		
23	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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Topic 6 – Relations vs. Functions – Chapter 5 (5.1-5.5) (FP 10.6)		
24	5.1/5.2 Be able to express relationships in a variety of ways. Correctly identify whether a relationship is a function or not with justification (NC)(Skill)	
25	5.2/5.5 Correctly determine the domain and range of linear & non-linear relations using interval notation, set notation or lists (NC)(Skill)	
26	5.2 Be able to change between function notation and equations in two variables and how to use function notation to find values (NC)(Skill)	
27	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)(NC) (Skill & Problem Solving)	
Comprehensive Test #2: Topics 4,5,6 (Estimated date Mid November)		
Topic 7 – Slope & Linear Relations – Chapters (5.2, 5.5, 5.6, 5.7, 6.1.2) (Outcome FP 10.7 & 10.8)		
28	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 (NC) (Skill)	
29	5.6/5.7 Understand and determine the rate of change of a linear relation (NC) (Skill & Problem Solving)	
30	5.7 Determine and interpret the intercepts of a linear function given the graph or the equation (NC) (Skill & Problem Solving)	
31	6.2 Determine whether two lines are parallel or perpendicular (NC) (Skill & Problem Solving)	
Topic 8 – Equations of Lines – Chapter 6.4-6.6 (Outcome 10.8 & 10.9)		
32	6.4 Write the equation of a linear function in slope-intercept form (either from given info or from a graph). Given an equation in slope-intercept form be able to identify the values of slope and y intercept. Graph an equation given in slope-intercept form . (NC)(Skill)	
33	6.5 Write an equation of a line in point-slope form (either from given info or from a graph). Given an equation in point-slope form be able to identify the values of slope and one point and graph it. Graph a linear function given its equation in point-slope form (NC)(Skill)	
34	6.5 Write an equation (in more than one form) of a line given two points on the line (NC)(Skill)	
35	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) (NC)(Skill)	
36	6.5 Write an equation of a line that is parallel or perpendicular to a given line (NC)(Skill)	
37	6.4 Use an equation of a linear function to solve a situational problem (NC) (Skill & Problem Solving)	
Topic 9– Systems of Linear Relations – Chapter 7 (Outcome 10.10)		
38	7.2 Solve a system graphically, with/without technology , and verify the solutions (C) and (NC)(Skill)	
39	7.4 Solve a system algebraically using substitution and/or elimination verify the solutions (C)(Skill)	
40	Create a linear system to model a situation & solve (C) (Skill & Problem Solving)	
41	7.6 Determine the number of solutions for a linear system (C)(Skill)	
Comprehensive Test #3: including Topics 7,8,9 (estimated date: mid-January)		
Final Exam including Topics 1-9 (Date Jan. 22, 2020 8:20am)		