

Farmingdale Public Schools						
Grade 7 Mathematics Curriculum - Scope and Sequence					September 2010	
Director: Gerardine M. Johnson-Carpenter, Ed.D.						
Text: NY Mathematics: Applications and Concepts Course 3						
Glencoe Mathematics 2005						
DATE	LESSON	STRAND	GLENCOE	MATH IN ACTION	COACH	CONTINENTAL PRESS
UNIT I: DECIMALS & FRACTIONS - 11 Days						
	1. How do we name place value? How do we round decimals? How do we compare and order decimals?			46-49		
	2. Justify the reasonableness of answers using estimation. How do we add and subtract whole numbers and decimals?	7N19		46-49		
	3. Justify the reasonableness of answers using estimation. How do we multiply whole numbers and decimals? How do we divide decimals by whole numbers and decimals?	7N19		46-49		
	4. How do we convert between scientific notation and standard form for numbers larger than one?	7N5, 7N6		96-97 138-139 558-559	27-30	17-20
	5. How do we convert between improper fractions and mixed numbers? How do we convert between fractions and decimals?		62-66	242-247		

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	6. How do we compare and order mixed numbers, fractions and decimals on a number line?		67-70	248-249		
	7. Justify the reasonableness of answers using estimation. How do we add and subtract fractions with like and unlike denominators?	7N19	82,88	256-257		
	8. How do we add and subtract mixed numbers? How do we subtract mixed numbers with renaming?		83, 89	258-259 260-261		
	9. How do we multiple fractions and mixed numbers? How do we divide fractions and mixed numbers?		71-72 77-78	282-287 297		
	10. Review					
	11. Test					
	UNIT II: MATHEMATICAL PROPERTIES - 9 Days					
	1. What are the properties for addition and multiplication?	6N2-5	13-15	46, 82		21-24
	2. What is the distributive property?	6N2-5	13-15			21-24
	3. How do we use exponents?	7N4	12, 98-99	94-95	23-26	45-48
	4. How do we use the order of operations?	7N11	11	170-171	55-59	49-52
	5. How do we solve with zero and negative exponents?	7N14	98-101		60-63	
	6. How do we multiple and divide powers with the same bases?	7N11	584-587			

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	7. How do we write and evaluate algebraic expressions?	7A1	39-42	174-175	80-83	69-72
	8. Review					
	9. Test					
	UNIT III: MEASUREMENT - 8 Days					
	1. What are the metric units of length, mass, and capacity? How do we convert from metric units to metric units?	7M2, 7M3 7M4	606-607	170-171	160-166	133-140
	2. Justify the reasonableness of weight/mass estimates. What are the customary units of weight/mass? How do we convert them within a system?	7M13 7N19 7M3, 7M4	604-605		72-75 163-166	149-152 137-140
	3. Justify the reasonableness of length estimates. What are the customary units of length? How do we convert them within a system?	7M13 7N19 7M3, 7M4	604-605		72-75 163-166	149-152 137-140
	4. Justify the reasonableness of capacity estimates. What are the customary units of capacity? How do we convert them within a system?	7M13 7N19 7M3, 7M4	604-605		72-75 163-166	149-152 137-140
	5. Determine the tool and technique to measure with an appropriate level of precision: mass.	7M9 7M12	358-362		184-187	137-140
	6. How do we evaluate formulas for given input values?	7A6			101-103	89-92
	7. Review					

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	8. Test					
	UNIT IV: INTEGERS - 11 Days					
	1. What are integers? What is absolute value?	7N1 7N11	17-21	538-539	34-37	13-16, 41
	2. How do we compare integers? How do we use a number line to compare and order integers?	7N3	18	538-539	38-41	
	3. How do we multiply integers? How do we divide integers?	7N12	34-36	554-555	50-54	41-44
	4. How do we add integers?	7N12 7N13	23-24	542-543	50-54	41-44
	5. How do we subtract integers?	7N12 7N13	28	546-547	50-54	41-44
	6. More practice with integers.	7N12 7N13	23-36	542-547	34-41 50-54	13-16, 41-44
	7. How do we convert between scientific notation and standard form for numbers less than one?	7N5, 7N6	104-107	558-559	27-30	17-20
	8. Compare numbers written in scientific notation.	7N7	106		31-33	17-20
	9. How do we evaluate expressions with integers? Order of operations with integer numbers.	7N11		570-572	55-59	49-52

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	10. Review					
	11. Test					
	UNIT V: NUMBER THEORY & SYSTEMS - 11 Days					
	1. What are the divisibility rules?		608	212-213		
	2. What are prime, composite, and relatively prime numbers?		609-610	214-215	46-49	29-32
	3. How do we find the prime factorization of a number?	7N10	609-610	214-215	46-49	29-32
	4. How do we find the greatest common factor?	7N8	610	220-221	42-45	25-28
	5. How do we find the least common multiple?	7N9	612	222-223	42-45	25-28
	6. How do we state the value of the square root of a perfect square (up to 225)? How do we estimate the value of non-perfect squares using consecutive whole numbers and a calculator?	7N15 7N16 7N18 7N19	116-122	356-357	64-67	45-48, 53-56
	7. How do we distinguish between the various subsets of real numbers?	7N1, 7N2	125-128		34-37	13-16
	8. How do we classify irrational numbers as non-repeating/non-terminating decimals?	7N15 7N17 7N2, 7N3	125-128	356-357	68-71	13-16
	9. How do we graph real numbers on a number line?	7N3	125-128		38-41	13-16

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	10. Review					
	11. Test					
	UNIT VI: ALGEBRA - 10 Days					
	1. What is the difference between expressions and equations? How do we translate between words phrases and algebraic equations?	7A1	39-42	176-177	91-94	77-80
	2. How do we solve one step equations with addition and subtraction?	7A4	45-49, 92	182-183	91-94	77-80
	3. How do we solve one step equations with multiplication and division?	7A4	50-52, 93	184-185	91-94	77-80
	4. How do we solve two step equations?	7A4	474-477		91-94	77-80
	5. More practice solving two step equations	7A4	474-477		91-94	77-80
	6. How do we translate, solve, and check equations?	7A1	478-483	176-185		
	7. How do we solve inequalities?	7A5	469-497 500-502	62-63 142-143	95-98	81-84
	8. How do we graph solutions on a number line?	7G10	492-495	560-561	95-98	81-84
	9. Review					

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	10. Test					
	UNIT VII: GEOMETRY - 12 Days					
	1. What is the rectangular coordinate plane? How do we plot order pairs?		142	562-563		97-100
	2. How do we define geometric terms?			326-327		
	3. How do we measure and classify angles?		256-259	328-329		
	4. How do we classify polygons? How do we find missing angles of polygons?	7A9, 7G7	278	344-345		105-108
	5. What are similar and congruent shapes?		178-182 279-282	346-347		
	6. How do we classify triangles and solve for a missing angle?		263-264	340-341		
	7. Identify the right angle, hypotenuse, and legs of a right triangle. Identify the relationship between the lengths of the three sides of right triangle. (Pythagorean Theorem)	7G5, 7G6	132-136		147-153	121-124
	8. How do we calculate the unknown length of a side of a right triangle using the Pythagorean Theorem.	7G8, 7G9	137-140		147-153	121-124
	9. How do we classify quadrilaterals and solve for a missing angle?	7G7	272-275	344-345	143-146	105-108

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	10. How do we find the perimeter and area of squares and rectangles? How do we plot points forming rectangles and squares and compute their perimeter and area?	7A6	613	58-59 98-99		
	11. Review					
	12. Test					
	UNIT VIII: GEOMETRIC MEASUREMENT - 11 Days					
	1. How do we find the area of parallelograms and triangles?	7A6	314-315	100-101		
	2. How do we find the area of trapezoids?	7A6	315-316	100-101		
	3. How do we plot points forming quadrilaterals and compute their perimeter and area?	7A6				
	4. How do we find the circumference of circles?	7A6, 7G1	319-320	102-103	123-126	109-112
	5. How do we find the area of circles?	7A6, 7G1	320-321	102-103	123-126	109-112
	6. Practice finding area and perimeter of odd shapes?	7A6	326-329			
	7. What are space figures? How do we classify three dimensional figures?	7G3	331-334	456-457	127-132	113-116
	8. How do we find the volume of rectangular prisms and cylinders?	7A6, 7G2	335-338	186-187 470-471	139-142	117-120

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	9. How do we find the total surface area of rectangular prisms and cylinders? How do we estimate surface area?	7A6 7M11 7G4	347-351	460-461 464-465	133-138 192-196	117-120
	10. Review					
	11. Test (PROVIDE FORMULA SHEET)					
	UNIT IX: STATISTICS - 14 Days					
	1. How do we read and interpret graphs?	7S6, 7S8		22-27	202-209 246-249	165-168
	2. How do we create frequency tables, histograms, and bar graphs? (double bar graphs)	7S1, 7S3	420-424	24-25 420-421	218-229	173-176
	3. How do we create line plots and line graphs? (double lines graphs)	7S1, 7S3		18-19 26-27	224-229	173-176
	4. How do we draw central angles in a given circle using a protractor (circle graph)?	7M8	426-429		179-183 210-213	169-172
	5. How do we display data in a circle graph?	7S2	426-429		210-213	169-172
	6. How do we find mean, median, mode and range?	7S4, 7S5	36, 69 435	150-153	214-217 230-234	161-164
	7. How do we interpret and create stem and leaf plots?			434-435		

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	8. How do we find measures of variation?	7S4	442-445			
	9. How do we create box-and-whisker plots	7S6	446-449			
	10. Determine and justify the most appropriate graph to display a given set of data (pictograph, bar graph, line graph, circle graph).	7S3	430-433		218-229	161-172
	11. What are misleading statistics?	7S7, 7S9	450-451	432-433	235-241	171-180
	12. What are Venn diagrams and how do we create them?		123	438-439		
	13. Review					
	14. Test					
	UNIT X: PROBABILITY - 12 Days					
	1. What is theoretical probability? How do we find the probability of simple events?	7S10 7S11 7S12	374-377	496-497	246-249	185-192
	2. How do we find the probability of compound events?	7S10	396-398	498-499		
	3. How do we illustrate the sample space of multiple events? What are tree diagrams? How do we use the counting principle and make lists? Practice finding probabilities using tree diagrams and the counting principle.	7S8	380-383	508-509		185-188
	4. How do we find the probability of independent events?	7S10	396-399	510-511		189-192

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	5. How do we find the probability of dependent events?	7S10	396-399	512-515		189-192
	6. More practice of dependent and independent events.	7S10	396-399	510-515		189-192
	7. How do we find the number of permutations of objects?	7S8	384-387			
	8. How do we find the number of combinations of objects?	7S8	388-391			
	9. How do we find experimental probability?	7S8 7S10 7S12	400-403			
	10. How do we use sampling to make predictions?	7S9	406-409	502-503		193-196
	11. Review					
	12. Test					
	UNIT XI: RATIOS, RATES, & PROPORTIONS - 10 Days					
	1. What are ratios? How do we write ratios? How do we find equivalent ratios?					
	2. What are rates and unit rates and how are they used?					
	3. How do we solve proportions?	6N9	156-159	374-375		57-60

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	4. How do we use proportions to solve scale drawings and similar figure problems?	7M5, 7M6	157	376-377	171-174	145-148
	5. How can proportions be used to solve recipe and other miscellaneous problems?	7M5	170-173	378-379		57-60
	6. Convert money with the use of an exchange rate table and calculator.	7M1	178-184	380-381	167-170	129-132
	7. How do we use percent as a ratio?		170-173	382-383		
	8. How do we convert between fractions, decimals, and	7M7			175-178	145-148
	9. Review		206-209	386-387		33-36
	10. Test		210-214	388-393		33-36
	UNIT XII: PERCENTS - 11 Days					
	1. How do we find percent of a number?					
	2. How do we use the percent proportion?					
	3. More practice on using the percent proportion?		228-231	394-397		57-60
	4. How do we use the percent proportion to solve word problems?	6N9 6N10	216-219	398		33-36, 57-60
	5. How do we calculate discount and sales tax?	6N9 6N10	232-235	398		33-36, 57-60

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	6. How do find commission and total pay?					
	7. More practice with discount, sales tax, and commission.		238	404-405		
	8. How do we find simple interest?		234			
	9. How do we use percents with circle graphs?					
	10. Review		241-244		99-103	90
	11. Test	7S2, 7S6		424-425	210-213	169-172
	UNIT XIII: MONOMIALS - 10 Days					
	1. How do we add and subtract monomials with exponents of one?	7A2	469-473		88-90	73-76
	2. Identify a polynomial as an algebraic expression containing one or more terms format a column	7A3	570		84-87	73-76
	3. How do we solve equations by combining like terms?	7A2	570-573		91-94	77-80
	4. How do we solve equations with variables on both sides?	7A4	482-485		91-94	77-80
	5. Practice solving equations using the distributive property.	7A4			91-94	77-80

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	6. Draw the graphic representation of a pattern that can be expressed as an equation or from data in a table.	7A7			104-110	97-100
	7. Write a function rule from a table of values.	7A10	517-520		111-116	93-96
	8. Calculate the direct variation from a given set of values.	7A8			104-110	93-100
	9. Review					
	10. Test					
	May - June					
	Build a pattern to develop a rule for determining the sum of the interior angles of polygons.	7A9				
	Write an equation to represent a function from a table values	7A8				
	Calculate distance using a map scale	7M1				
	Calculate unit prices using proportions	7M5				
	Convery money between different currencies with the use of an exchange rate table and a calculator	7M7				