

**Knox County Pacing Guide**

# **3130 Foundations I**

**2006-2007**

**Key**

**C-Compact** - objectives that have been previously taught

**A-Assessed** – objectives assessed by Knox County or the state

**I-Important** - objectives providing enrichment skills or support to subsequent mathematics courses (optional)

**Updated June, 2006**

## Chapter 1 & 2: Introduction to Algebra Tools and Integers

<b>Number of Days</b>  <b>10</b>	<b>Vocabulary</b> absolute value, algebraic expression, algebraic inequality, coefficient, constant, equation, evaluate, inequality, like terms, ordered pair, solve, substitute, term	<b>Writing Prompts</b> <ul style="list-style-type: none"> <li>Give two examples of an expression: One that is algebraic and one that isn't. Explain how they are different.</li> <li>Write a statement comparing the resulting sign of the product of two negative integers with the resulting sign of the sum of two negative integers.</li> </ul>
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Day	Section	Key	Knox County Objective	Page Numbers	Suggested Assignment
1	Pre-test			S5-S17	1-40
2	2.1	A	Add integers using opposites.	60-63	1-23, 27-44 odd
3	2.2	A	Subtract integers opposites.	64-67	1-23, 27-37 odd
4	1.3	A	Solve equations using addition and subtraction.	13-17	14-36 even
5	2.3	A	Multiply and divide integers.	68-71	1-22, 23-43 odd (omit numbers: #9,10,11,20,21,22,41,43)
	1.4	A	Solve equations using multiplication and division.	18-22	1-28, 29-44 odd
6	2.4	A	Solve equations with integers.	74-77	1-26, 27-43 odd
	Quiz				
7	1.5	A	Solve and graph inequalities.	23-27	1-17, 18-42 even, 43, 44
	2.5	A	Solve inequalities with integers.	78-81	1-45 odd, 51, 52
8	1.1	I	Evaluate algebraic expressions.	4-7	1-30, 31-49 odd
	1.2	I	Write algebraic expressions.	8-12	1-24, 26
9	1.6	I	Combine like terms in an expression.	28-31	1-18, 19-49 odd
	Review		Review of sections covered in Chapters 1 & 2		Textbook Chapter 1 & 2 Reviews and Teacher supplements
10	Test		Test over sections covered in Chapters 1 & 2		

### Chapter 3 Rational and Real Numbers

<b>Number of Days</b>	<b>Vocabulary</b>	<b>Writing Prompts</b>
<b>8</b>	Irrational number, rational number, real number, reciprocal	<ul style="list-style-type: none"> <li>• Explain how you can be sure that a fraction is simplified.</li> <li>• Explain why the denominators are not added when adding or subtracting fractions.</li> <li>• Explain the difference between a rational and an irrational number. Give two examples of each type.</li> </ul>

Day	Section	Key	Knox County Objective	Page Numbers	Suggested Assignment
11	3.1	A	Write rational numbers in equivalent forms.	112-116	1-24, 26-48 even, 49, 50
	3.2	A	Add and subtract decimals.	117-120	1-21, 22-42 even
		A	Add and subtract rational numbers with like denominators.	117-120	
12	3.3	A	Multiply fractions, mixed numbers, and decimals.	121-125	1-63 odd
	3.4	A	Divide fractions and decimals.	126-130	1-22, 25-57 odd, 62
13	3.5	A	Add and subtract fractions with unlike denominators.	131-134	1-26
14	Quiz				
	3.6	A	Solve equations with rational numbers.	136-139	1-26, 27-41 odd
15	3.7	I	Solve inequalities with rational numbers.	140-143	1-12, 14-25, 27-41 odd
16	3.8	I	Find square roots.	146-149	1-43 odd, 48
	3.9	I	Estimate square roots to a given number of decimal places.	150-153	1-4, 6-13, 15-24, 39-41
		I	Solve problems using square roots.	150-153	
17	3.10	I	Determine if a number is rational or irrational.	156-159	1-12, 16-27, 31-41 odd
	Review		Review of sections covered in Chapters 3		Textbook Chapter 1 & 2 Reviews and Teacher supplements
18	Test		Test over sections covered in Chapters 3		Teacher Resource Book

## Chapter 10: More Equations and Inequalities

<b>Number of Days</b>  <b>8</b>	<b>Vocabulary</b> equation, inequality, solve, variable, Symmetric Property, Commutative Property, Associative Property, Distributive Property	<b>Writing Prompts</b> <ul style="list-style-type: none"> <li>• Explain the difference between the Commutative and the Associative properties.</li> <li>• List the steps required for solving <math>4x-3+2x = 7</math>. (Using the two-column proof format, write an algebraic proof for the problem).</li> </ul>
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Day	Section	Key	Knox County Objective	Page Numbers	Suggested Assignment
19			Skill Bank: Use properties.		
20	10.1	A	Solve two-step equations.	498-501	1-20,21-29 odd,30-33,37-41
21-22	10.2	A	Solve multistep equations.	502-505	1-24, 25-37, odd, 44-50 <i>{Teacher supplement/workbook}</i>
23-24	10.3	I	Solve equations with variables on both sides of the equal sign.	507-511	1-20, 21-27 odd, 28-31, 33,35, 40-46 <i>{Teacher supplement/workbook}</i>
25	Review		Review of sections covered in Chapters 10	532-534	3-28, 32-34
26	Test		Test over sections covered in Chapters 10		

## Chapter 7: Ratios and Similarity

<b>Number of Days</b>  <b>10</b>	<b>Vocabulary</b> cross product, equivalent ratio, proportion, rate, ratio, scale, scale drawing, scale factor, scale model, similar, unit price, unit rate	<b>Writing Prompts</b> <ul style="list-style-type: none"> <li>• Describe how ratios can be used to form proportions.</li> <li>• Describe why it is or is not helpful for supermarkets to include unit prices on price labels.</li> <li>• Write about situations other than reducing or enlarging a picture in which similar figures would be useful.</li> </ul>
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Day	Section	Key	Knox County Objective	Page Numbers	Suggested Assignment
27	7-1	A	Find equivalent ratios to create proportions.	342-345	1-16, 17-25 odd, 26-28, 34-42
28-29	7-2	A	Work with rates and ratios.	346-349	1-10, 11-21 odd, 25-31 {Teacher supplement/workbook}
30-31	7-4	A	Solve proportions.	356-359	1-29, 35, 40-44 {Teacher supplement/workbook}
32	Quiz			360	1-8, 17-25
	7-6	A	Use scale factors.	368-371	1-17, 21-26
		A	Find missing dimensions in similar figures.		
33	7-7	I	Make comparisons between and find dimensions of scale drawings and actual objects.	372-375	1-12, 13-21 odd, 22-25, 30-34
34	7-8	I	Make comparisons between and find dimensions of scale models and actual objects.	376-379	1-27, 32-39
35	Review		Review of sections covered in Chapters 7	392-394	1-14, 20-23, 27-34
36	Test		Test over sections covered in Chapters 7		Teacher Resource Book

## Chapter 8: Percents

<b>Number of Days</b>  <b>13</b>	<b>Vocabulary</b> commission, commission rate, interest, percent, percent of change, percent decrease, percent increase, principal, rate of interest, sales tax, simple interest, withholding tax	<b>Writing Prompts</b> <ul style="list-style-type: none"> <li>• Compare the two methods for solving percent problems – writing and solving equations and setting up proportions.</li> <li>• Describe the process used to solve each of the three types of percent problems.</li> <li>• Describe how to calculate the percent increase in your height over the last year.</li> </ul>
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Day	Section	Key	Knox County Objective	Page Numbers	Suggested Assignment
37	Skills Bank	I	Use mixed numbers and fractions: Recognize and use terminating and repeating decimals. Compare and order rational numbers.	756,767,770	
38	8-1	A	Relate decimals, fractions, and percents.	400-403	1-21, 23, 27-32
39	8-1	A	Interpret circle graphs relating real world data.		
40	8-2	A	Find percents.	405-408	1-10, 11-19 odd, 20, 22-24, 28-32
41	8-3	A	Find a number when the percent is known.	410-412	1-16, 17-23 odd, 26-30
	Quiz			414	1-17
42	8-4	A	Find percent increase and decrease.	416-419	1-16, 17-27 odd, 29-33, 37-40
43-44	8-6	A	Find commission, sales tax, and withholding tax.	424-426	Day #1: 1, 2, 5, 6, 9, 11, Day #2: Economic Link -- p.427
45-46	8-6	A	Find commission, sales tax, and withholding tax.	424-426	Day #1: 3, 4, 7, 8, 10, 12, 13-15, 20-24 Day#2: {Teacher supplement/workbook}
47	8-7	A	Compute simple interest.	428-431	1-19, 24-30
48	Review		Review of sections covered in Chapters 8	438-440	1-19, 26-32
49	Test		Test over sections covered in Chapters 8		

### Chapter 4: Collecting, Displaying, and Analyzing Data

<b>Number of Days</b>  <b>6</b>	<b>Vocabulary</b> bar graph, frequency table, histogram, line graph, mean, median, mode, outlier, stem- and -leaf plot	<b>Writing Prompts</b> <ul style="list-style-type: none"> <li>In five different basketball games, Michael Jordan scored 12, 26, 28, 6 and 51 points. Explain which measure .</li> <li>Have students write a paragraph about why someone might want to mislead the public using statistics or graphs.</li> </ul>
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Day	Section	Key	Knox County Objective	Page Numbers	Suggested Assignment
50	4-2	A	Organize data into tables and stem- and -leaf plots.	179-183	1-10,11,13,16,
51	4-3	A	Find measures of central tendency.	184-187	1-14, 15-23 odd
52	4-5	A	Display data in bar graphs, line graphs, and histograms.	196-199	1-9
53	4-6	I	Recognize misleading graphs and statistics.	200-203	1-10
54	Review		Review sections covered in Chapter 4	214-216	7-11, 14-16
55	Test		Test over sections covered in Chapter 4		

### Chapter 5: Plane Geometry

Number of Days	Vocabulary	Writing Prompts
7	acute angle, acute triangle, angle, complementary angles, congruent, equilateral triangle, isosceles triangle, line, line of symmetry, obtuse angle, obtuse triangle, parallel lines, perpendicular lines, plane, point, ray, right angle, right triangle, scalene triangle, segment, supplementary angles, tessellation, Triangle-Sum Theorem, vertical angles	<ul style="list-style-type: none"> <li>• Give examples of points, lines, planes, and angles that you can see in the classroom.</li> <li>• Explain how a transversal could intersect two other lines so that all of the acute angles formed are not congruent.</li> </ul>

Day	Section	Key	Knox County Objective	Page Numbers	Suggested Assignment
56	5-1	A	Classify and name figures.	222-225	1-24,25-31 odd, 39-43
57	5-2	A	Identify parallel and perpendicular lines. Identify the angles formed when parallel lines are cut by a transversal.	228-231	1-17,18,21,26-36
58	5-3	A	Find unknown angles of a triangle.	234-238	120,21-33 odd, 39-41
59	5-8	A	Identify symmetry in figures.	259-262	1-15,21-27
60	5-9	A	Predict and verify patterns involving tessellations.	263-267	1-6,7-13 odd, 18-26
61	Review		Review sections covered in Chapter 5	272-274	1-11, 23-25
62	Test		Test over sections covered in Chapter 5		Teacher Resource Book

## Chapter 6: Introduction to Exponents & Perimeter, Area, and Volume

<b>Number of Days</b>  <b>19</b>	<b>Vocabulary</b> area, base, circle, circumference, complex shapes, cone, cylinder, diameter, exponent, exponential form, great circle, hemisphere, hypotenuse, lateral area, lateral surface, leg, non-overlapping figures, perimeter, power, prism, pyramid, Pythagorean Theorem, radius, regular pyramid, right cone, slant height, sphere, surface area	<b>Writing Prompts</b> <ul style="list-style-type: none"> <li>• Write about a real world situation in which you would need to find the perimeter and area of an object. Estimate the measures of the object you have chosen.</li> <li>• List some real world examples of right triangles. Write about why it might be important to know the lengths of the sides of these right triangles.</li> </ul>
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Day	Section	Key	Knox County Objective	Page Numbers	Suggested Assignment
63	2.6	A	Evaluate an expression with exponents.	84-87	1-12, 14-25, 27-45 odd, 47-50
64	2.7	A	Apply the properties of exponents.	88-91	1-17, 19-42, 46, 48
65	2.7	A	Evaluate an expression with a zero exponent.	88-91	{Teacher supplement/workbook}
66	2.8	A	Evaluate an expression with a negative exponent.	92-95	1-43
67	Quiz		Quiz over exponents.		
68	6-1	A	Find the perimeter and area of rectangles and parallelograms.	280-284	1-16, 17, 20, 24-26
69	6-2	A	Find the area of a triangle and a trapezoid.	285-287	1-20, 21-25 odd,
70-71	6-3	I	Use the Pythagorean Theorem and its converse to solve problems.	290-293	1-21, 23-29 odd, 31-33
72	6-4	A	Find the area and circumference of a circle.	294-297	1-5, 7-15, 17-25 odd, 28, 29
73	Skills Bank/Review	I	Find the area of complex and irregular shape.	773	1-4
74	Quiz				
75	6-6	I	Find the volume of prisms and cylinders.	307-311	1-3, 8-10
76	6-8	I	Find the surface area of prisms and cylinders.	316-319	1, 2, 5, 6, 9-13 odd
77	6-7	I	Find the volume of pyramids and cones.	312-315	1-6, 9-14, 17, 18
78	6-9	I	Find the surface area of pyramids and cones.	320-323	1, 2, 5, 6, 9, 11
79	6-10	I	Find the volume and surface area of spheres.	324-327	1-8, 10-17, 19-23 odd
80	Review		Review sections covered in Chapter 6	334-336	1-13, 17-25
81	Test		Test over sections covered in Chapter 6		

## Chapter 9: Probability

<b>Number of Days</b>	<b>Vocabulary</b>	<b>Writing Prompts</b>
<b>8</b>	certain, equally likely, event, experiment, experimental probability, fair, Fundamental Counting Principle, impossible, odds against, odds in favor, outcome, probability, sample space, theoretical probability, tree diagram, trial	<ul style="list-style-type: none"> <li>• Identify some examples of probability in everyday life: Some examples may include weather forecasts, sports, or board games.</li> <li>• Write about how probability has affected a game you have played.</li> <li>• Write about a personal situation in your life which would have you consider all the possible outcomes of an event.</li> </ul>

Day	Section	Key	Knox County Objective	Page Numbers	Suggested Assignment
82	9-1	A	Find the probability of an event by using the definition of probability.	446-450	1-15, 21-25
83	9-2	A	Estimate probability using experimental models.	451-453	1-11, 17-21
84	9-4	A	Estimate probability using theoretical methods.	462-465	1-15, 17-25 odd, 27-34
85	9-5	A	Find the number of possible outcomes in an experiment.	467-470	1-17, 22-28
86	Review		Review sections covered in Chapter 9	490-492	1-6, 8-10
	Test		Test over sections covered in Chapter 9		
87-88	EOC Review		Review of Chapters 1 through 10		
89	Final Exam		Knox County End-of-Course Examination Foundations One		