



IMPACT MATHEMATICS

Algebra and More

Course 1

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STANDARDS		PAGE REFERENCES
M6.A Numbers and Operations		
ASSESSMENT ANCHOR		
M6.A.1	Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers, and number systems.	
M6.A.1.1	Express numbers in equivalent forms.	
M6.A.1.1.1	Represent common percents as fractions and/or decimals (e.g., $25\% = \frac{1}{4} = .25$) – common percents are 1%, 10%, 25%, 50%, 75%, 100%.	Student Edition: 236-239 <i>On Your Own Exercises</i> 243-246 <i>Lab Investigation</i> 268-269 Teacher's Guide: T237, T238, 247
M6.A.1.1.2	Convert between fractions and decimals and/or differentiate between a terminating decimal and a repeating decimal.	Student Edition: 128-131, 131-134, 134-136 <i>On Your Own Exercises</i> 137-140 <i>Review and Self-Assessment</i> 149, 151 #42-49 Teacher's Guide: T131, T133-T136
M6.A.1.1.3	Represent a number in exponential form (e.g., $10 \times 10 \times 10 = 10^3$).	Student Edition: 81, 498-500, 501-503 <i>On Your Own Exercises</i> 90 #8-10, 508-509 #11-28 <i>Just the Facts</i> 115 Teacher's Guide: T81

STANDARDS	PAGE REFERENCES
<p>M6.A.1.1.4 Represent a mixed number as an improper fraction.</p>	<p>Student Edition: 97-98 <i>On Your Own Exercises</i> 107 #15-18, 108 #35-36 Teacher's Guide: T98, T127</p>
<p>M6.A.1.2 Compare quantities and/or magnitudes of numbers.</p>	
<p>M6.A.1.2.1 Compare and/or order whole numbers, mixed numbers, fractions and/or decimals (do not mix fractions and decimals – decimals through thousandths).</p>	<p>Student Edition: 99-101, 102-103, 120-122, 128-131, 131-134 <i>On Your Own Exercises</i> 124 #24-26 Teacher's Guide: T101, T103, T105, T111, T114, T122, T130, T131, T134</p>
<p>M6.A.1.3 Apply number theory concepts (i.e., factors, multiples).</p>	
<p>M6.A.1.3.1 Find the Greatest Common Factor (GCF) of two numbers (through 50) and/or use the GCF to simplify fractions.</p>	<p>Student Edition: 82-84, 100-101 <i>On Your Own Exercises</i> 90-95, 493 #15-20 <i>Review and Self-Assessment</i> 148 Teacher's Guide: T83, T84</p>
<p>M6.A.1.3.2 Find the Least Common Multiple (LCM) of two numbers (through 50) and/or use the LCM to find the common denominator of two fractions.</p>	<p>Student Edition: 85-87, 102-103 <i>Lab Investigation</i> 88-89 <i>On Your Own Exercises</i> 91-95, 247 #48-50, 481 #26-29 <i>Review and Self-Assessment</i> 148 Teacher's Guide: T85, T87</p>
<p>M6.A.1.3.3 Use divisibility rules for 2, 3, 5 and/or 10 to draw conclusions and/or solve problems.</p>	<p>Student Edition: <i>Remember</i> 78</p>
<p>M6.A.1.4 Use or develop models to represent percents.</p>	
<p>M6.A.1.4.1 Model percents (through 100%) using drawings, graphs and/or sets (e.g., circle graph, base ten blocks, etc.).</p>	<p>Student Edition: 226-230, 230-233, 249-251 <i>On Your Own Exercises</i> 240-241, 245 Teacher's Guide: T231-T233, T249-T251</p>

STANDARDS		PAGE REFERENCES
ASSESSMENT ANCHOR		
M6.A.2	Understand the meanings of operations, use operations and understand how they relate to each other.	
M6.A.2.1	Select and/or use operations to simplify or solve problems.	
M6.A.2.1.1	Complete equations by using the following properties: associative, commutative, distributive and identity.	Student Edition: 452, 560-562 Teacher's Guide: T77, T100, T452, T561
ASSESSMENT ANCHOR		
M6.A.3	Compute accurately and fluently and make reasonable estimates.	
M6.A.3.1	Apply estimation strategies to a variety of problems.	
M6.A.3.1.1	Use estimation to solve problems involving whole numbers and decimals (up to 2-digit divisors and 4 operations).	Student Edition: 104-105, 128-131 <i>On Your Own Exercises</i> 107, 110-111 Teacher's Guide: T105, T130-T131
M6.A.3.2	Solve problems with and without the use of a calculator.	
M6.A.3.2.1	Solve problems involving operations (+, -, x, ÷) with whole numbers, decimals (through thousandths) and fractions (avoid complicated LCDs) – straight computation or word problems.	Student Edition: 15-18, 19-22, 154-157, 157-160, 161-163, 172-175, 175-177, 178-181, 182-185, 185-188, 198-201, 201-203, 204-206, 207-210, 210-212 <i>On Your Own Exercises</i> 25-26, 27 #23-28, 166-170, 189-197, 213-219 <i>Lab Investigation</i> 164-165
M6.B Measurement		
ASSESSMENT ANCHOR		
M6.B.1	Demonstrate an understanding of measurable attributes of objects and figures, and the units, systems and processes of measurement.	
M6.B.1.1	Compare and/or determine elapsed time.	
M6.B.1.1.1	Determine and/or compare elapsed time to the minute (time may cross AM to PM or more than one day).	Student Edition: 16 #1, #3, 429 #21, 582 #19, 583 #22

STANDARDS		PAGE REFERENCES
ASSESSMENT ANCHOR		
M6.B.2	Apply appropriate techniques, tools and formulas to determine measurements.	
M6.B.2.1	Choose or use appropriate tools and/or units to determine measurements within the same system.	
M6.B.2.1.1 Use or read a ruler to measure to the nearest 1/16 inch or millimeter.	Student Edition: 117-119, 482-486 <i>On Your Own Exercises</i> 108 #35, 123 #12-21, 490 #1-4 Teacher's Guide: T118-T119	
M6.B.2.1.2 Choose the more precise measurement of a given object (e.g., smaller measurements are more precise).	Student Edition: 117-119, 209, 470-471, 486-489, 495-497 Teacher's Guide: T209	
M6.B.2.1.3 Measure angles using a protractor up to 180° – protractor must be drawn – one side of the angle to be measured should line up with the straight edge of the protractor.	Student Edition: 467-471, 472-476 <i>On Your Own Exercises</i> 477 #1-14 Teacher's Guide: T467-T469, 481	
M6.B.2.2	Solve problems involving length, perimeter, area and/or volume of geometric figures.	
M6.B.2.2.1 Find the perimeter of any polygon (may include regular polygons where only the measure of one side is given – same units throughout).	Student Edition: 482-486 <i>On Your Own Exercises</i> 13 #21, 426 #17, 490-491 Teacher's Guide: T484, T485, 493	
M6.B.2.3	Identify, label, and/or list properties of angles or triangles.	
M6.B.2.3.1 Define, label and/or identify right, straight, acute and obtuse angles.	Student Edition: 467-471 <i>Remember</i> 334 Teacher's Guide: T467	

STANDARDS		PAGE REFERENCES
M6.C Geometry		
ASSESSMENT ANCHOR		
M6.C.1	Analyze characteristics and properties of two- and three-dimensional geometric shapes and demonstrate understanding of geometric relationships.	
M6.C.1.1	Define and/or use basic properties of triangles, quadrilaterals, pentagons, hexagons, heptagons, octagons, nonagons, decagons and circles.	
M6.C.1.1.1 Identify, classify and/or compare polygons (up to ten sides).		Student Edition: 42-46, 46-49, 50-53, 54-57 <i>Lab Investigation</i> 58-60 <i>On Your Own Exercises</i> 61-68, 533 Teacher's Guide: T43, T44, T45, T51, T53
M6.C.1.1.2 Identify and/or describe properties of all types of triangles (scalene, equilateral, isosceles, right, acute, obtuse).		Student Edition: <i>On Your Own Exercises</i> 63, 532, 546-547 Teacher's Guide: 63
M6.C.1.1.3 Identify and/or determine the measure of the diameter and/or radius of a circle (when one or the other is given).		Student Edition: 486-489 <i>On Your Own Exercises</i> 479 #23, 491-493 Teacher's Guide: T486, T487, T488, T489
M6.C.1.1.4 Identify and/or use the total number of degrees in a triangle, quadrilateral and/or circle.		Student Edition: 46-49, 54-57, 472-476 <i>Lab Investigation</i> 58-60 <i>On Your Own Exercises</i> 64, 477-480 Teacher's Guide: T48, T57, T473, T481
M6.C.1.2	Represent and/or use concepts and relationships of lines and line segments.	
M6.C.1.2.1 Identify, describe and/or label parallel, perpendicular or intersecting lines.		Student Edition: 469, 472 <i>On Your Own Exercises</i> 477 <i>Remember</i> 532 Teacher's Guide: T469, T471, T472

STANDARDS		PAGE REFERENCES	
M6.C.1.2.2	Identify, draw and/or label points, planes, lines, line segments, rays, angles and vertices.	Student Edition: 466-471, 472-476 <i>On Your Own Exercises</i> 477	Teacher's Guide: T467, T468, T469, T470, T471
ASSESSMENT ANCHOR			
M6.C.2	Locate points or describe relationships using the coordinate plane.		
M6.C.2.1	Identify, plot or match points given an ordered pair.		
M6.C.2.1.1	Plot, locate or identify points in Quadrant I and/or on the x and y axes with intervals of 1, 2, 5 or 10 units – up to a 200 by 200 grid. Points may be in-between lines.	Student Edition: 302-305 <i>On Your Own Exercises</i> 311-312, 619 #31	Teacher's Guide: T302, T303, T304, T305
M6.D Algebraic Concepts			
ASSESSMENT ANCHOR			
M6.D.1	Demonstrate an understanding of patterns, relations and functions.		
M6.D.1.1	Create or extend patterns.		
M6.D.1.1.1	Create, extend or find a missing element in a pattern displayed in a table, chart or graph (pattern must show at least 3 repetitions – may use up to 2 operations with whole numbers).	Student Edition: 4-9, 14-18, 32-35, 42-45, 410-413 <i>On Your Own Exercises</i> 10-13, 36-41	Teacher's Guide: T4-T9, T15-T18, T32-T35, T411-T413
M6.D.1.2	Analyze patterns.		
M6.D.1.2.1	Determine a rule based on a pattern or illustrate a pattern based on a given rule (displayed on a table, chart or graph; pattern must show at least 3 repetitions).	Student Edition: 28-31, 32-35, 134-136, 410-413, 414-418, 419-421 <i>On Your Own Exercises</i> 36-41, 139-140, 422-429	Teacher's Guide: T29-T31, T134-136, T411-T414, T418, T419-T421

STANDARDS		PAGE REFERENCES
ASSESSMENT ANCHOR		
M6.D.2	Represent and/or analyze mathematical situations and structures using algebraic symbols, words, tables, and graphs.	
M6.D.2.1	Select and/or use appropriate strategies to solve number sentences.	
M6.D.2.1.1	Identify the inverse operation needed to solve a one-step equation.	Student Edition: 571-573, 574-576, 576-578 <i>Lab Investigation</i> 563-564 <i>On Your Own Exercises</i> 579-583 Teacher's Guide: T571-T573, T574-T576, T577, T578
M6.D.2.1.2	Solve a one-step equation (i.e., using the inverse operation – whole numbers only).	Student Edition: 558-560, 560-562, 571-573, 574-576, 576-578 <i>Lab Investigation</i> 563-564, 579-583 <i>On Your Own Exercises</i> 565-569 Teacher's Guide: T559-560, T561-T562, T571-T573, T574-T576
M6.D.2.2	Create and/or interpret expressions or equations that model problem situations.	
M6.D.2.2.1	Match an equation or expression involving one variable to a verbal math situation (one operation only).	Student Edition: 436-439, 439-442, 451-454, 455-456, 559-560, 560-562 <i>On Your Own Exercises</i> 443-445, 565-569 Teacher's Guide: T436-T439, T442, T453
M6.E Data Analysis and Probability		
ASSESSMENT ANCHOR		
M6.E.1	Formulate questions that can be addressed with data and/or collect, organize, display, and analyze data.	
M6.E.1.1	Interpret data shown in frequency tables, histograms, circle, bar or double bar graphs, line or double line graphs or line plots.	
M6.E.1.1.1	Analyze data and/or answer questions pertaining to data represented in frequency tables, circle graphs, double bar graphs, double line graphs or line plots (for circle graphs, no computation with percents).	Student Edition: 230-233, 278-282, 282-286, 286-291, 346-349, 350-352, 362-365, 366-369 <i>On Your Own Exercises</i> 353-360, 380-388 Teacher's Guide: T278-T282, T346-T349, T350-T352

STANDARDS	PAGE REFERENCES
<p>M6.E.1.1.2 Choose the appropriate representation for a specific set of data (choices should be the same type of graph).</p>	<p>Student Edition: 390-393, 394-395 <i>Lab Investigation</i> 396-398 <i>On Your Own Exercises</i> 399-401 <i>Review and Self-Assessment</i> 406 Teacher’s Guide: T391-T393</p>
<p>M6.E.1.1.3 Display data in frequency tables, circle graphs, double bar graphs, double line graphs or line plots using a title, appropriate scale, labels and a key when needed. Circle graphs for open-ended items must show a center point and tic marks.</p>	<p>Student Edition: 230-233, 278-282, 282-286, 286-291, 346-349, 350-352, 362-365, 366-369 <i>On Your Own Exercises</i> 353-360, 380-388 Teacher’s Guide: T278-T282, T346-T349, T350-T352</p>
<p>ASSESSMENT ANCHOR</p>	
<p>M6.E.2 Select and use appropriate statistical methods to analyze data.</p>	
<p>M6.E.2.1 Describe data sets using mean, median, mode and/or range.</p>	
<p>M6.E.2.1.1 Determine/calculate the mean, median, mode and/or range of displayed data (data can be displayed in a table or line plot – use whole numbers only up to 2 digits).</p>	<p>Student Edition: 370-372, 373-376, 394-395 <i>On Your Own Exercises</i> 380-388 <i>Lab Investigation</i> 396-398 Teacher’s Guide: T370-372, T373-376, T394-395</p>
<p>ASSESSMENT ANCHOR</p>	
<p>M6.E.3 Understand and apply basic concepts of probability.</p>	
<p>M6.E.3.1 Determine all possible combinations, outcomes and/or calculate the probability of a simple event.</p>	
<p>M6.E.3.1.1 Define and/or find the probability of a simple event (express as a fraction in lowest terms).</p>	<p>Student Edition: 605-607, 608-612, 621-622, 623-624, 624-625, 626-630 <i>Lab Investigation</i> 613-614 <i>On Your Own Exercises</i> 615-618, 631-636 Teacher’s Guide: T605-T607, T608-T612, 619</p>
<p>M6.E.3.1.2 Determine/show all possible combinations involving no more than 20 total arrangements (e.g., tree diagram, table, grid).</p>	<p>Student Edition: 639-642, 643-645 <i>On Your Own Exercises</i> 646-650 Teacher’s Guide: T639-T642, T643-T645</p>

