


**Eighth Grade Curriculum and Assessment Guide**

**Number and Computation Strand – Grade 8**

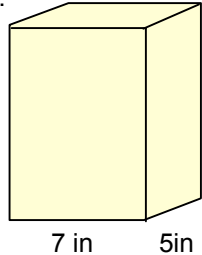
Big Ideas	End-Of-Year Test Question	Resources/Investigations	On-line Resources/Other	Notes/Comments
<p><b>NC8.1</b> Understand, calculate, compare, and order whole numbers, natural numbers, and integers. MA-M-1.1.1 MA-M-1.2.1 M-8-NC-1</p>	<p>Jane has 3 times as many books as Sue and half as many as Bob. If Bob has 12 books, how many books does Sue have? A) 2 B) 6 C) 8 D) 18 <i>Ans: (B)</i></p>	<p>Teach addition and subtraction of integers using gummie bears on a number line.  Alge-Blaster® 3 Information on this software can be found at the following site: <a href="http://www.vanduyne.com/AB3.HTM">http://www.vanduyne.com/AB3.HTM</a></p>	<p><i>Illuminations</i> Online Investigation of Decimal Multiplication with Dynamic Geometry: <a href="http://standards.nctm.org/document/eexamples/chap6/6.1/index.htm">http://standards.nctm.org/document/eexamples/chap6/6.1/index.htm</a> Introducing Integers: Web Resources- <a href="http://mathstar.lacoe.edu/newmedia/integers/intro/web/general.html">http://mathstar.lacoe.edu/newmedia/integers/intro/web/general.html</a> The Resource Room <a href="http://www.resourceroom.net/Math/integersthree.asp">http://www.resourceroom.net/Math/integersthree.asp</a></p>	
<p><b>NC8.2</b> Add, subtract, multiply, and divide inverse relationships. Also be able to square and take the square root of a number. M-8-NC-5 MA-M-1.3.3</p>	<p>Use <math>a^2+b^2= c^2</math> to solve. Given a right triangle with a hypotenuse of 13ft. and a leg of 5ft. find the length of the other leg. <i>Ans: (12ft.)</i></p>	<p>Hands-On Equations Information on these materials can be found at the following site: <a href="http://www.borenson.com/?src=overture">http://www.borenson.com/?src=overture</a>  Alge-Blaster® 3 Information on this software can be found at the following site: <a href="http://www.vanduyne.com/AB3.HTM">http://www.vanduyne.com/AB3.HTM</a></p>	<p>Middle School Math resources <a href="http://mathcentral.uregina.ca/RRRRbrowse.mid.html">http://mathcentral.uregina.ca/RRRRbrowse.mid.html</a></p>	
<p><b>NC8.3</b> Extend understanding of number properties to include the distributive property of multiplication over addition. MA-M-1.3.2</p>	<p>A rectangle has the following dimensions: <math>x + 3</math> 7  If the area of this rectangle is 112 square units, what is the value of x? <i>Ans: (13)</i></p>	<p>24 Game – Info located at <a href="http://www.24game.com/">http://www.24game.com/</a></p>	<p>Number Properties <a href="http://www.bonita.k12.ca.us/schools/ramona/teachers/carlton/tutorialexplanations/exM-R/numberpropertiesfolder/01numberproperties.html">http://www.bonita.k12.ca.us/schools/ramona/teachers/carlton/tutorialexplanations/exM-R/numberpropertiesfolder/01numberproperties.html</a></p>	

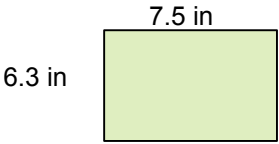
<p><b>NC8.4</b> Add, subtract, multiply, and divide rational and irrational numbers. M-8-NC-3 M-8-NC-4 MA-M-1.1.2</p>	<p>The square root of 16 plus the square root of 64 equals the square root of what number? <i>Ans:(square root of 144)</i></p>	<p>Bake cookies. Have the students double a recipe, or halve a recipe to be made in class. Borrow toaster ovens, and have the students bring in the ingredients. Only allow the use of a 1/8 measuring cup, and a half teaspoon measure. The following is a link for cooking in the classroom: <a href="http://www.eduplace.com/math/mathsteps/7/a/">http://www.eduplace.com/math/mathsteps/7/a/</a> <a href="http://www.edhelper.com/radicals.htm">http://www.edhelper.com/radicals.htm</a></p>	<p>Rational Numbers <a href="http://www.eduplace.com/math/mathsteps/7/a/">http://www.eduplace.com/math/mathsteps/7/a/</a> Irrational Numbers <a href="http://www.edhelper.com/radicals.htm">http://www.edhelper.com/radicals.htm</a></p>	
<p><b>NC8.5</b> Calculate and assess percentages and proportions in consumer applications. M-8-NC-2 MA-M-1.1.3 MA-M-1.2.3</p>	<p>Which is the better buy, a 12oz box of cereal for \$2.69, or an 18oz box for \$3.99? Explain your answer.  <i>Ans: (18oz)</i></p>	<p>Have students measure the length of their forearm and write it as a ratio to their height. Chart the class and look for a pattern. Compare foot length to height, arm span to height, etc.... Sample problems <a href="http://www.colchsfac.ac.uk/.../biology/gens/section2.html">http://www.colchsfac.ac.uk/.../biology/gens/section2.html</a> Survey the class on their favorite day of the week. Graph the results and calculate the percentage for each day.</p>	<p>Percentages and proportions <a href="http://www.beebe.freemove.co.uk/download/maths/percent.pdf">http://www.beebe.freemove.co.uk/download/maths/percent.pdf</a></p>	
<p><b>NC8.6</b> Understand estimation strategies, which help to determine the reasonableness of solutions. MA-M-1.2.2</p>	<p>Jake invited 36 friends to a party. If 26 of them showed up, which fraction is the best estimate for the number of invited friends who showed?  A) 1/2 B) 2/3 C) 5/6 D) 5/7  <i>Ans: (D)</i></p>	<p>Guessing Jar Activities Mental math strategies Some mental math links: <a href="http://www.aaamath.com/men.html">http://www.aaamath.com/men.html</a></p>	<p>Estimations resources <a href="http://www.aaamath.com/est.html">http://www.aaamath.com/est.html</a></p>	

<p><b>NC8.7</b> Understand, compute, compare, and order fractions, decimals, and percents.</p>	<p>If the Great American Ball Park has 82,000 seats, and 42% of the tickets for those seats were sold, how many tickets were sold?</p> <p>A) 40,500 B) 50,064 C) 39,245 D) 34,440</p> <p><i>Ans: (D)</i></p>	<p><i>Frac Fact , Fraction Pinball, and Fab– Mathematics Pentathlon Institute, Inc. Game by John C del Regato, Ph. D. and Mary E. Gilfeather, Ph. D.</i></p>	<p><i>Illuminations Online Investigation of Decimal Multiplication with Dynamic Geometry:</i> <a href="http://standards.nctm.org/document/eexamples/chap6/6.1/index.htm">http://standards.nctm.org/document/eexamples/chap6/6.1/index.htm</a></p> <p>Virtual Manipulatives: Fraction Pieces <a href="http://matti.usu.edu/nlvm/nav/frames_asid_274_g_3_t_1.html?open=activities">http://matti.usu.edu/nlvm/nav/frames_asid_274_g_3_t_1.html?open=activities</a></p> <p>Virtual Manipulatives: Comparing Fractions <a href="http://matti.usu.edu/nlvm/nav/frames_asid_159_g_3_t_1.html">http://matti.usu.edu/nlvm/nav/frames_asid_159_g_3_t_1.html</a></p> <p>Virtual Manipulatives: Fraction Equivalencies <a href="http://matti.usu.edu/nlvm/nav/frames_asid_105_g_3_t_1.html">http://matti.usu.edu/nlvm/nav/frames_asid_105_g_3_t_1.html</a></p> <p>Virtual Manipulatives: Percent/Fractions/Decimals <a href="http://matti.usu.edu/nlvm/nav/frames_asid_160_g_3_t_1.html?open=activities">http://matti.usu.edu/nlvm/nav/frames_asid_160_g_3_t_1.html?open=activities</a></p>	
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Conrad, S. & Fiegler, D., (2001) Math Contests; Grades 7 & 8 (And Algebra Course 1) Volume 3. Math League Press, P.O. Box 17, Tenafly, NJ 07670-0017.  
Open Response: The Burger King From the Jefferson County Public Schools Open Response Bank of Questions: <http://170.185.2.105/corecontent/>  
password: ORQ2002

Geometry and Measurement – Grade 8

Big Ideas	End-Of-Year Test Question	Resources/Investigations	On-line Resources/Other	Notes/Comments
<p><b>M-8-GM-1</b> Discover and apply the Pythagorean Theorem</p> <p>cc 2.2.7, 2.1.1, 2.1.2, 2.1.5</p>	<p>Using a protractor and ruler, draw a right triangle and measure all of its sides. Use the Pythagorean Theorem to confirm your hypotenuse's measurement.</p>	<p><i>Teaching with Manipulatives: Middle School Investigations, Squares on a Triangle</i> by Rosamond Welchman-Thischler, published by Cuisenaire</p>		
<p><b>M-8-GM-2</b> Derive and use formulas for various rates (e.g. distance/time, miles per hour)</p> <p>cc 2.3.1</p>	<p>Sally rides the bus to school each day, which takes 30 min. She lives 13.6 miles from school. How fast is the bus traveling?</p> <p>a) 40.8 mph b) 6.8 mph c) 27.2 mph d) 45 mph</p> <p><i>Ans: (c)</i></p>	<p><i>Algebra Problems from Groundworks, The Point is . . . 1 – 4, grade 6</i> by Greenes/Findell. Published by Creative Publications</p>		
<p><b>M-8-GM-3</b> Develop and apply formulas for surface area and volume for cubes, cylinders and rectangular prisms and investigate relationships between them.</p> <p>cc 2.1.3, 2.2.1, 2.2.5</p>	<p>Find the surface area and volume of the following prism:</p>  <p>10 in</p> <p>7 in 5in</p> <p><i>Ans: (Vol: 350 in<sup>3</sup>; SA: 310 in<sup>2</sup>)</i></p>	<p><i>Connected Math, Ruins of Montarek</i> by Lappan, Fey, et al. Published by Prentice Hall</p>		

<p><b>M-8-GM-4</b> Develop and apply proportionality and relationships between scale models and actual objects.</p> <p>cc 2.1.4, 2.3.3</p>	<p>If the key on a scale drawing of a house says 1 inch = 3 feet, how long would a wall be in the house if it is drawn as 12 1/4 inches on the drawing? (Round to the nearest inch.)</p> <p><i>Ans: (37 ft. 2 in)</i></p>	<p><i>Britannica's Mathematics in Context, Triangles and Patchwork</i>, published by Holt, Rinehart and Winston</p> <p>"How Big is Barbie" <i>Math Projects Journal, Volume 2, Number 2</i> (<a href="http://www.mathprojects.com">www.mathprojects.com</a>)</p>	<p><a href="http://www.mathprojects.com">www.mathprojects.com</a></p>	
<p><b>M-8-GM-5</b> Investigate transformations, congruence, proportionality and similarity (e.g. enlargements, reductions, proportional triangles) in the coordinate plane.</p> <p>cc 2.1.4, 2.2.1, 2.2.3, 2.3.3</p>	<p>When performing a transformation, the scale factor between two figures is 1/3. Does this mean that the image of the original figure will be smaller or larger than the original figure and will the two figures be congruent or similar?</p> <p>a) Larger and congruent b) Larger and similar c) Smaller and congruent d) Smaller and similar</p> <p><i>Ans: (D)</i></p>	<p><i>Teaching with Manipulatives . . .</i> pg. 15 Similar Triangles, reflect it, hinged mirrors</p> <p><i>Britannica's Mathematics in Context, Patterns and Figures, grades 8 &amp; 9.</i></p> <p><i>Investigations with a MIRA</i></p>		
<p><b>M-8-GM-6</b> Find the area of regular and irregular shapes</p> <p>cc 2.2.2</p>	<p>Find the area of the shaded region:</p>  <p><i>Ans: 47.25 in<sup>2</sup></i></p>			

**Probability & Statistics – Grade 8**

Big Ideas	End-Of-Year Test Question	Resources/ Investigations	On-line Resources/ Other	Notes/Comments
<p><b>M-8-PS-1</b> Collect, organize, analyze, &amp; interpret data, using and justifying an appropriate graph in a variety of graphical methods (e.g. circle graphs, scatter plots, box &amp; whisker plots, histograms MA-M-PS 3.1.2 MA-M-PS 3.1.3 MA-M-PS 3.2.1 MA-M-PS 3.2.2</p>	<p>Use the box and whisker plot to answer: A) Describe the set of data used to make this box and whisker plot. Give at least 4 different kinds of information. B.) What can't you tell about the data by looking at the box and whisker plot?</p>		<p><a href="http://www.pbs.org/teachersource/mathline/lessonplans/msmp/steppinout/steppinout_procedures.shtm">http://www.pbs.org/teachersource/mathline/lessonplans/msmp/steppinout/steppinout_procedures.shtm</a></p>	
<p><b>M-8-PS 2</b> Make predictions, draw conclusions, and verify results from statistical data and probability experiments including games of chance, board games or grading scales. MA-PS 3.2.1 3.2.5</p>	<p>In a bag of marbles, 5/12 are red, 1/3 are blue, 1/6 are green, and 1/12 are yellow. If a marble is taken from the bag without looking, what color is it most likely to be?  <b>Ans: (red)</b></p>		<p>Remove One Game <a href="http://www.pbs.org/teachersource/mathline/lessonplans/msmp/removeone/removeone_procedures.shtm">http://www.pbs.org/teachersource/mathline/lessonplans/msmp/removeone/removeone_procedures.shtm</a></p>	
<p><b>M-8-PS-3</b> Compare data from various types of graphs. MA-PS 3.2.2 3.3.1</p>	<p>Chose the graph that best supports your answer. Explain your choice. Of the 3 areas, New York made the most significant progress in eliminating unhealthy air days.(graph is in Math Thematics, book 1,pg. 8-82)</p>		<p>Question No. 09, block:1996-8M12 Metro Rail Co. <a href="http://www.nces.ed.gov/nation_sreportcard/ITMRLs/qtab.asp">http://www.nces.ed.gov/nation_sreportcard/ITMRLs/qtab.asp</a> <a href="http://matti.usu.edu/nlvm/nav/sitegd.html">http://matti.usu.edu/nlvm/nav/sitegd.html</a></p>	
<p><b>M-8-PS-4</b> Recognize that statistics can be interpreted in many ways MA-PS 3.2.5</p>	<p>In the 2000 Presidential election, Gallop polled 50 Kentuckians as they left the voting booth. 33 said they voted for George W. Bush. Gallop predicted</p>		<p><a href="http://mathforum.org/workshops/usi/dataproject/usi.midlessons.html">http://mathforum.org/workshops/usi/dataproject/usi.midlessons.html</a></p>	

	that 66% of Kentucky voters would vote for Bush. Was this an accurate way to predict a winner? Defend your answer.			
<b>M-8-PS-5</b> Identify and describe the number of possible arrangements of several objects, using a tree diagram or the basic counting principle, and make a sample space represented in the form of a list, picture, chart or a tree diagram MA.PS 3.2.6 3.2.7	Four students are running a race. List each possible outcome in the sample space using a tree diagram or organized list.		Sample space <a href="http://www.nces.ed.gov/nation_sreportcard/ITMRLs/qtab.asp">http://www.nces.ed.gov/nation_sreportcard/ITMRLs/qtab.asp</a>	
<b>M-8-PS-5</b> Investigate and explain the role of probability in everyday decision making including designing and conducting probability experiments and interpreting the results. MA-PS 3.3.2 3.3.3 3.3.4	A poll is being taken at Baker Middle School to determine whether to change the school mascot. Which of the following would be the best place to find a sample of students to interview that would be most representative of the entire student body? A.) An algebra class, B.) The cafeteria C.) The guidance office D.) A French class E.) The faculty room	Question from: <a href="http://www.nces.ed.gov/nation_sreportcard/ITMRLs/qtab.asp">http://www.nces.ed.gov/nation_sreportcard/ITMRLs/qtab.asp</a>	<u>Chances Are</u> part 3 Oh no! Look out below for a UFO! <a href="http://www.pbs.org/teachersource/mathline/lessonplans/esmp/chances/chances3_procedures.shtm">http://www.pbs.org/teachersource/mathline/lessonplans/esmp/chances/chances3_procedures.shtm</a>  <u>Rock Around the Clock</u> <a href="http://www.pbs.org/teachersource/mathline/lessonplans/msmp/rock/rock_procedures.shtm">http://www.pbs.org/teachersource/mathline/lessonplans/msmp/rock/rock_procedures.shtm</a>	

<p><b>M-8-PS-6</b> Explore concepts of randomness and independent events MA-PS 3.3.2 3.3.3 3.3.4</p>	<p>True or False: You pick a chip out of a bag and do not replace it; then a second chip drawn out of the bag is independent of the first drawing. (F-1<sup>st</sup> chip must be returned to the bag.)</p>		<p><a href="http://matti.usu.edu/nlvm/nav/frames_asid_117_g_3_t_5.html">http://matti.usu.edu/nlvm/nav/frames_asid_117_g_3_t_5.html</a></p>	
<p><b>M-8-PS-7</b> Determine theoretical (mathematical) probabilities, compare that to experimental results, and explain reasons why there might be differences (express probability as a ratio, decimal, percent as appropriate for a given situation MA-PS 3.3.2 3.2.7 3.3.2</p>	<p>8<sup>th</sup> graders tossed 4 coins 40 times and listed their results. A) What is the experimental probability of 3 heads and 1 tail? B) What is the theoretical probability of tossing 3 heads and 1 tail? C) Why might these be different? Outcomes/frequency: 4 heads/2; 3 heads,1 tail/12; 2 heads,2 tails/10; 3 tails,1 head/15; 4 tails/1.</p>		<p>Fantasy Baseball part 2 <a href="http://www.pbs.org/teachersource/mathline/lessonplans/msmp/fantasy/fantasy2_procedures.shtm">http://www.pbs.org/teachersource/mathline/lessonplans/msmp/fantasy/fantasy2_procedures.shtm</a></p>	
<p><b>M-8-PS-8</b> Determine and interpret clusters, quartiles, gaps and outliers in data MA-PS 3.2.1</p>	<p>Members in a club are the following ages: 21, 18, 10, 45, 26, 25, 51, 42, 23, 23, 46, 44, 27, 25, 26, 43, and 44. What is the range of the lower quartile? Are there gaps, clusters, and/or outliers in the data? What are they and what do these terms mean?</p>		<p><a href="http://matti.usu.edu/nlvm/nav/sitegd.html">http://matti.usu.edu/nlvm/nav/sitegd.html</a></p>	

Algebraic Ideas– Grade 8

Big Ideas	End-Of-Year Test Question	Resources/ Investigations	On-line Resources/Other	Notes/ Comments
<p><b>A 8.1</b> Recognize, analyze, create, and continue patterns – generalizing to nth term and defending generalizations. MA-M-4.2.4 MA-M-4.3.1</p>	<p><a href="http://timss.bc.edu/timss1995i/TIMSSPDF/BMIitems.pdf">http://timss.bc.edu/timss1995i/TIMSSPDF/BMIitems.pdf</a>  Page 126; Item T2b</p>	<p><b>Connected Mathematics</b> <i>Thinking with Mathematical Models</i> All Investigations <i>Variables and Patterns</i> All investigations. <i>Moving straight Ahead</i> Investigation 1</p>	<p><a href="http://www.nku.edu/~mathed/milliondollar.pdf">http://www.nku.edu/~mathed/milliondollar.pdf</a></p>	
<p><b>A 8.2</b> Represent, interpret, and describe functional relationships through tables, graphs, verbal, and symbolic rules -- especially those that involve linear relationships. MA-M-4.1.2 MA-M-4.2.3 MA-M-4.2.5 MA-M-4.2.6</p>	<p><b>Connected Mathematics</b> <i>Thinking with Mathematical Models</i> TE Page 64; Question 7</p>	<p><b>Connected Mathematics</b> <i>Thinking with Mathematical Models</i> Investigation 1 <i>Variables and Patterns</i> All Investigations. <i>Predicting from Patterns</i> All Investigations</p>	<p><a href="http://www.nku.edu/~mathed/statisticslesson.pdf">http://www.nku.edu/~mathed/statisticslesson.pdf</a></p>	
<p><b>A 8.3</b> Identify functions as linear or nonlinear and contrast properties from tables, graphs, or equations. MA-M-4.1.2</p>	<p>Explain how you can distinguish a linear relationship from a nonlinear relationship. Give an example of both a linear relationship and a nonlinear relationship and show each with words, equations, tables and graphs.</p>	<p><b>Connected Mathematics</b> <i>Thinking with Mathematical Models</i> Investigation 2 <i>Looking for Pythagoras</i> Investigation 4 <i>Predicting from Patterns</i> All Investigations</p>		

<p><b>A 8.4</b> Use a variety of methods (e.g., substitution, formula, in/out charts, etc.) and representations to create and solve linear equations involving one or more variables and one or more steps. MA-M-4.1.1 MA-M-4.1.2 MA-M-4.2.2 MA-M-4.2.3 MA-M-4.2.4 MA-M-4.2.6 MA-M-4.3.1</p>	<p>  MC   F:4A Q: 9 Sect:A  Content:30   Matrix   Artid:  Evaluate the expression: <math>3a - 2(b + 9)</math>, where <math>a = 5</math> and <math>b = 6</math>. A. -15 B. -10 C. 15 D. 30  <a href="#">TIMSS Released Achievement Item Sets</a> Page 10; I-8  <i>Ans: (A)</i></p>	<p><b>Connected Mathematics</b> <i>Variables and Patterns</i> Investigation 1 <i>Predicting from Patterns</i> All Investigations</p>	<p><a href="http://www.nku.edu/~amburg/sampleson.htm">http://www.nku.edu/~amburg/sampleson.htm</a></p>	
<p><b>A-8.5</b> Solve inequalities using a variety of methods and representations MA-M-4.1.1 MA-M-4.2.2 MA-M-4.2.3</p>	<p><a href="http://timss.bc.edu/timss1995i/TIMSSPDF/BMItems.pdf">http://timss.bc.edu/timss1995i/TIMSSPDF/BMItems.pdf</a> Page 57; item N-13</p>	<p><a href="#">Equations and Inequalities - Inequalities - First Glance</a> (<a href="http://www.math.com/school/subject2/lessons/S2U3L4GL.html">http://www.math.com/school/subject2/lessons/S2U3L4GL.html</a>)</p>	<p><a href="#">Solving Inequalities Overview</a> (<a href="http://www.purplemath.com/modules/ineqsolv.htm">http://www.purplemath.com/modules/ineqsolv.htm</a>) <a href="#">Solving Inequalities</a> (<a href="http://www.aaamath.com/equ725-inequalities.html">http://www.aaamath.com/equ725-inequalities.html</a>) <a href="#">Solving Linear Inequalities</a></p>	
<p><b>A-8.6</b> Recognize and generate equivalent forms for simple algebraic expressions and solve linear equations. – Simplify simple algebraic expressions. – Express formulas in equivalent forms (example: <math>d=r*t</math>; <math>d/t = r</math>; <math>r=d/t</math>) MA-M-4.2.1 MA-M-4.2.2 MA-M-4.2.6</p>	<p><a href="http://timss.bc.edu/timss1995i/TIMSSPDF/BMItems.pdf">http://timss.bc.edu/timss1995i/TIMSSPDF/BMItems.pdf</a>  Page 27; K-4 Page 42; Item L-16</p>	<p><b>Connected Math</b> <i>Variables and Patterns</i> Investigation 4 <i>Predicting from Patterns</i> All Investigations</p>		

<p><b>A 8.7</b> Explore relationships between symbolic expressions and graphs of lines, paying particular attention to the meaning of intercept and slope. MA-M-4.1.2 MA-M-4.2.5 MA-M-4.3.1 MA-M-4.3.2</p>	<p>Graph the solution to <math>y = \frac{6}{5}x + 7</math> on a number line.</p>	<p><b>Connected Mathematics</b> Predicting from Patterns All Investigations Thinking with Mathematical Models Investigation 1 Looking for Pythagoras – Investigation 6 Variables and Patterns Investigation 1 Investigation 4</p>		
<p><b>A 8.8</b> Model and solve contextualized problems using various representations such as graphs, tables and equations. MA-M-4.2.3 MA-M-4.2.5</p>	<p>A shirt is on sale for 25% off the original price, <math>p</math>. Which equation could you use to figure out the sale price, <math>s</math>, of the shirt? A. <math>p = s + 25</math> B. <math>s = p - .25</math> C. <math>p = s + .25s</math> D. <math>s = p - .25p</math></p> <p><i>Ans: (D)</i> <a href="http://timss.bc.edu/timss1995i/TIMSSPDF/BMItems.pdf">http://timss.bc.edu/timss1995i/TIMSSPDF/BMItems.pdf</a></p> <p>Page 122; Item T-1b Page 118; Item s-2c</p>	<p><b>Connected Mathematics</b> Thinking with Mathematical Models Investigation 1 Investigation 4 Variables and Patterns All Investigations</p>		
<p><b>A 8.9</b> Graph in all four quadrants of a Cartesian system/grid to analyze and understand how change in one variable affects changes in another variable (e.g.; <math>s=d/t</math>; acceleration; <math>d=rt</math>; etc.) MA-M-4.1.3</p>	<p><b>Connected Mathematics</b> <i>Thinking with Mathematical Models</i> TE Page 65 Question 1.</p> <p><a href="http://timss.bc.edu/timss1995i/TIMSSPDF/BMItems.pdf">http://timss.bc.edu/timss1995i/TIMSSPDF/BMItems.pdf</a> Page 66; O-1</p>	<p><a href="http://standards.nctm.org/document/eexamples/chap6/6.2/index.htm">http://standards.nctm.org/document/eexamples/chap6/6.2/index.htm</a></p> <p><b>Connected Mathematics</b> <i>Predicting from Patterns</i> All Investigations <i>Accentuate the Negative</i> Investigation 5 <i>Thinking with Mathematical Models</i></p>		

<p>MA-M-4.2.5 MA-M-4.3.2</p>		<p>Investigation 1 Investigation 2 Investigation 4 <i>Looking for Pythagoras</i> Investigation 1 Investigation 3 <i>Variables and Patterns</i> All Investigations. <i>Stretching and Shrinking</i> Investigation 2</p>		
<p><b>A 8.10</b> Investigate the concept of dependent variable and independent variables and the relationships between them. MA.M. -4.1.1 MA.M-4.3.1 MA-M-4.3.2</p>	<p><b>Connected Mathematics</b> <i>Variables and Patterns</i>, TE,</p>	<p><b>Connected Mathematics</b> <i>Variables and Patterns</i> Investigation 1 <i>Predicting from Patterns</i> All Investigations</p>		