



# Standard #: MAFS.912.N-Q.1.2

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Define appropriate quantities for the purpose of descriptive modeling. ★

<b>Subject Area:</b> Mathematics	<b>Grade:</b> 912
<b>Domain-Subdomain:</b> Number & Quantity: Quantities	<b>Cluster:</b> Level 2: Basic Application of Skills & Concepts
<b>Cluster:</b> Reason quantitatively and use units to solve problems. (Algebra 1 - Supporting Cluster) (Algebra 2 - Supporting Cluster) - Clusters should not be sorted from Major to Supporting and then taught in that order. To do so would strip the coherence of the mathematical ideas and miss the opportunity to enhance the major work of the grade with the supporting clusters.	<b>Date Adopted or Revised:</b> 02/14
<b>Content Complexity Rating:</b> Level 2: Basic Application of Skills & Concepts - <a href="#">More Information</a>	<b>Date of Last Rating:</b> 02/14
<b>Status:</b> State Board Approved	<b>Assessed:</b> Yes

## Remarks/Examples

### Algebra 1 Content Notes:

Working with quantities and the relationships between them provides grounding for work with expressions, equations, and functions.

## Related Courses

Course Number	Course Title
<a href="#">1200310:</a>	Algebra 1 (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
<a href="#">1200320:</a>	Algebra 1 Honors (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
<a href="#">1200330:</a>	Algebra 2 (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
<a href="#">1200340:</a>	Algebra 2 Honors (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
<a href="#">1200370:</a>	Algebra 1-A (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
<a href="#">1200400:</a>	Intensive Mathematics (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
<a href="#">1200410:</a>	Mathematics for College Success (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
<a href="#">1200700:</a>	Mathematics for College Readiness (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
<a href="#">7912070:</a>	Access Liberal Arts Mathematics (Specifically in versions: 2014 - 2015, 2015 - 2018, 2018 - 2019, 2019 and beyond (current))
<a href="#">7912080:</a>	Access Algebra 1A (Specifically in versions: 2014 - 2015, 2015 - 2018, 2018 - 2019, 2019 and beyond (current))
<a href="#">2000500:</a>	Bioscience 1 Honors (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
<a href="#">2000510:</a>	Bioscience 2 Honors (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
<a href="#">2000520:</a>	Bioscience 3 Honors (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
<a href="#">1200315:</a>	Algebra 1 for Credit Recovery (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
<a href="#">1200335:</a>	Algebra 2 for Credit Recovery (Specifically in versions: 2014 - 2015, 2015 - 2019 (course terminated))
<a href="#">1200375:</a>	Algebra 1-A for Credit Recovery (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
<a href="#">7912100:</a>	Fundamental Algebraic Skills (Specifically in versions: 2013 - 2015, 2015 - 2017 (course terminated))
<a href="#">1207300:</a>	Liberal Arts Mathematics 1 (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
<a href="#">7912075:</a>	Access Algebra 1 (Specifically in versions: 2014 - 2015, 2015 - 2018, 2018 - 2019, 2019 and beyond (current))

## Related Access Points

Access Point

Access Points Number	Access Points Title
<a href="#">MAFS.912.N-Q.1.AP.2a:</a>	Determine and interpret appropriate quantities when using descriptive modeling.

## Related Resources

Lesson Plan

Name	Description
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<a href="#">Compacting Cardboard:</a>	Students with investigate the amount of space that could be saved by flattening cardboard boxes. The analysis includes linear graphs and regression analysis along with discussions of slope and a direct variation phenomenon.
<a href="#">Corn Conundrum:</a>	The Corn Conundrum MEA provides students with an agricultural problem in which they must work as a team to develop a procedure to select the best variety of corn to grow under drier conditions predicted by models of global climate change. Students must determine the most important factors that make planting crops sustainable in restricted climate conditions for the client. The main focus of this MEA is manipulating factors relating to plant biology, including transpiration and photosynthesis.
<a href="#">Farming in the Gilded Age: A Simulation:</a>	This video is about a simulation created by a teacher to show the hardships of "gambling" in the world of farming, especially in a past, less civilized time. The students were given 2000 and had to put 500 aside for various expenses. They were then given a list of 11 objects (crops and livestock) that they could chose from to purchase with the remaining 1500. The catch is, they only have a certain amount of space to use, and must plan which items will be more efficient in a set area. To simulate the purchasing of the crops and livestock, the teacher cut out squares with each item on it. He then had each group come up to spend their money on what they found fit for their particular group. After each group chose their ratios of crops and livestock, there was then a simulated growing season that had problems with certain crops and benefits of others. They then repeat the process for the following year with a different scenario for the growing season. At the end of the simulation, the teacher acted as if he was the banker that loaned the 2000 in the beginning. This is where it comes full circle to show why farming was so difficult in the past, and how it declined due to poor weather and the lack of the ability to pay off loans given to start farming in the first place.
<a href="#">Modeling: Having Kittens:</a>	This lesson unit is intended to help you assess how well students are able to interpret a situation and represent the constraints and variables mathematically, select appropriate mathematical methods to use, make sensible estimates and assumptions, investigate an exponentially increasing sequence and communicate their reasoning clearly.
<a href="#">Testing water for drinking purposes:</a>	The importance of knowing what drinking water contains. How to know what properties are present in different bottled water. Knowing the elements present in water that is advantageous to growth and development of many things in the body. To know what to be alert for in water and to understand the importance of water in general.

### Formative Assessment

Name	Description
<a href="#">Rain Damage Model:</a>	Students are asked to describe potentially important variables that can be used in a model to predict the amount of damage caused by a thunderstorm.
<a href="#">Time to Get to School:</a>	Students are asked to describe potentially important variables that can be used in a model to predict the amount of time required to get to school.

### Assessment

Name	Description
<a href="#">Sample 2 - High School Algebra 1 State Interim Assessment:</a>	This is a State Interim Assessment for 9th-12th grades.
<a href="#">Sample 4 - High School Algebra 1 State Interim Assessment:</a>	This is a State Interim Assessment for 9th-12th grades.

### Unit/Lesson Sequence

Name	Description
<a href="#">Sample Algebra 1 Curriculum Plan Using CMAP:</a>	<p>This sample Algebra 1 CMAP is a fully customizable resource and curriculum-planning tool that provides a framework for the Algebra 1 Course. The units and standards are customizable and the CMAP allows instructors to add lessons, worksheets, and other resources as needed. This CMAP also includes rows that automatically filter and display Math Formative Assessments System tasks, E-Learning Original Student Tutorials and Perspectives Videos that are aligned to the standards, available on CPALMS.</p> <p>Learn more about the sample Algebra 1 CMAP, its features and customizability by watching the following video:</p> <p>Using this CMAP</p> <p>To view an introduction on the CMAP tool, please <a href="#">click here</a>.</p>

To view the CMAP, click on the "Open Resource Page" button above; be sure you are logged in to your iCPALMS account.

To use this CMAP, click on the "Clone" button once the CMAP opens in the "Open Resource Page." Once the CMAP is cloned, you will be able to see it as a class inside your iCPALMS My Planner (CMAPs) app.

To access your My Planner App and the cloned CMAP, click on the iCPALMS tab in the top menu.

All CMAP tutorials can be found within the iCPALMS Planner App or at the following URL: [http://www.cpalms.org/support/tutorials\\_and\\_informational\\_videos.aspx](http://www.cpalms.org/support/tutorials_and_informational_videos.aspx)