

McPherson Unified Schools
District 418

6th Grade

7th Grade

Pre-Algebra

**Middle School
Math Curriculum
Assessments
2000**

Geometry

Algebra I



ADVANCED ALGEBRA - Sem I

Title: SYSTEMS OF EQUATIONS	Level: IV	Level: III	Level: II	Level: I
Criteria: Systems of Equations with no solutions	* Student shows an example with same slope a different y-intercept.	*Student shows the equations to have same slopes and same y-intercepts.	* Student shows the equations have a different slope.	* Student shows only one equation, or the equations are not linear
Criteria: System of Equations with infinite solutions	* Correct example - same slope and same y-intercept	* Example has same slope and different y-intercepts.	*Example has different slopes	* Student shows only one equation or the equation is not linear
Criteria: System of Equations with a single solution	* Correct example with different slopes		* Example has same slope	*Student shows only one equation or the equation is not linear
Criteria:				

* If the question has no response, a score of 0 will be given.

ALGEBRA I - Sem I

Title:	Level: IV	Level: III	Level: II	Level: I
Criteria: Equivalent sides of the equation	Correct equation and Complete explanation	Correct equation and incomplete explanation	Incorrect equation and minimal explanation correct or equation and no explanation.	Incorrect equation and No explanation
Criteria: Understanding Equivalent Equations	Correct explanation	* Mostly correct explanation with minor errors.	Partially correct explanation	Incorrect explanation
Criteria: Creating Equivalent Equations	All 3 equations correct	Two equations correct.	One equation correct	No equations correct
Criteria: Solving Equation	Correct solution and complete explanation	Correct solution and partial explanation	Correct solution and no explanation or incorrect solution and minimal explanation	Incorrect solution and no explanation.

*** If the question has no response, a score of 0 will be given.**

APPLIED 1 - Semester 1

Title: Shipping Department	Level: IV	Level: III	Level: II	Level: I
Criteria: Conclusion of box used	* Concluding appropriately that the total weight is not more than 5 lbs., (69 oz. = 4.32 lbs.). The heavier box is not needed. Mathematical support for the answer is correct.	Conclude the weight is less than 5 lbs, with math support, but choose the heavier box. Or Conclude weight greater than 5 lbs. with math support and do choose the heavier box. Or Proper conclusion with minor math error.	Concluding the weight is less than 5 lbs with no math support, but choose appropriate box.	Concluding that the weight is more than 5 lbs. needing the stronger box, and no mathematical support.

*** If the question has no response, a score of 0 will be given.**

APPLIED II - Semester I

Title: Price Restoration	Level: IV	Level: III	Level: II	Level: I
Criteria: Example	* Correct example	* Mostly correct example, but minor computational errors.	* Correct idea, but inaccurate calculations.	*Problem is attempted, but not correct.
Criteria: Explanation	* Thorough and accurate explanation of the example.	* Mostly correct explanation	* Mostly incorrect explanation.	* No explanation
Criteria: Solution	* Correct answer. Mike was wrong retaining the original price.	* Students answer "right", but state the amount should have been lower than the original price.	* Students answer "wrong", but state the amount should have been the original amount.	* Incorrect answer. Mike was correct in retaining the original price.

*** If the question has no response, a score of 0 will be given.**

GEOMETRY - Sem I

Title: Building a Fence	Level: IV	Level: III	Level: II	Level: I
Criteria: Two ways that LBDA and LADF are related	* Give two of the three choices: a) linear pair b) adjacent c) supplementary using the correct terminology	* Give two of the 3 choices: a) linear pair b) adjacent c) supplementary. Express the correct concepts without using the correct terminology	* Give one correct response, regardless of another incorrect response, no other response, or terminology	* All responses are incorrect.
Criteria: Naming a point on the interior of LEDF	* Give point G		* An answer of A, C, E, F or H	* Answer of point B, D or any answer other than a point.
Criteria: Conclusion of congruent angles.	* They give enough support to claim that CPCTC, or EF bisects angle DEH	* Shows understanding of the concepts, but lacks support to conclude the CPCTC.	* Some or very little information is correct.	* Response is on visual interpretation alone.
Criteria:				

*** If the question has no response, a score of 0 will be given.**

STATISTICS - Sem I

Title: Insurance Claims	Level: IV	Level: III	Level: II	Level: I
Criteria: Choosing measures of central tendency	For Company A: the MCT is the mean. Company B: MCT is the mode, Company C: MCT is the median. Correct terminology must be used.	Correct measure of central tendency is chosen for each company with incorrect terminology.	Incorrect choice of measure of central tendency for one or more companies.	Use of no measures of central tendency in their explanation.
Criteria: Selection of company	If the rationale is the mean or the median the choice is Company A. Mode should not be used because Company A does not have a mode. If range is the rationale, the choice is Co. A	Choice of Company C because of mode. Or The rationale is mean median or mode and they choose Company B (they chose highest numbers)	Incorrect mathematical support for their choice of a company.	No mathematical support for their choice of a company.
Criteria:				
Criteria:				

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ADVANCED ALGEBRA - Sem II

Title: Quadratic Function	Level: IV	Level: III	Level: II	Level: I
Criteria: Similarities $f(x)$ and $g(x)$	* Answer two of the following: a) both parabolas b) both open up c) axis of symmetry $x=0$ d) any other factual info.	* Answer two correct similarities with minor flaws in terminology or calculations.	* The student gives one correct similarity, with or without an incorrect second response.	* Both conclusions the student draws are incorrect.
Criteria: Differences $f(x)$ and $g(x)$	* Answer two of the following: a) vertices are different b) $g(x)$ is wider than $f(x)$ c) any other factual information	* Answer correct differences with minor flaws in terminology or calculations.	*The student gives one correct difference, with or without a second response.	
Criteria: Similarities of $f(x)$ and $h(x)$	* Answer two of the following: a) both are parabolas b) same width c) any other factual information	* Answer correct similarities with minor flaws in terminology or calculations.	* The student gives one correct similarity, with or without an incorrect second response.	
Criteria: Differences $f(x)$ and $h(x)$	* Answer 2 of the following: a) different vertices b) different axis of symmetry c) one opens up the other down d) any other factual information	* answer correct differences with minor flaws in terminology or calculations.	* The student gives one correct difference, with or without an incorrect second response.	↓







*** If the question has no response, a score of 0 will be given.**

ALGEBRA I - Sem II

Title:	Level: IV	Level: III	Level: II	Level: I
Criteria: Characteristics in common	Thorough understanding of concept (s)	Understanding of concept(s)	Partial understanding of concept(s)	Little or no understanding of concepts
Criteria: Graphing Equations	Three equations correct	Two equations correct	One equation correct	I No equations correct, but did try
Criteria: Writing an Equation	Correct equation for the chosen characteristic	Correct equation that demonstrates a characteristic not chosen.	Incomplete equation with correct slope.	Non-linear equation
Criteria:				

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APPLIED I - Semester II

Title: Floor Plan	Level: IV	Level: III	Level: II	Level: I
Criteria: Finding total area	* Correct answer should be: $(70' \times 46') - (24 \times 45) = 2140 \text{ ft.}^2$ or $(25' \times 46') + (45 \times 22) = 2140 \text{ ft.}^2$ or $(22' \times 70') + (25' \times 24') = 2140 \text{ ft.}^2$ or $(25' \times 24') + (25' \times 22') + (23' \times 22') + (22' \times 22')$ or any other appropriate method.	* Correct approach but incorrect mathematical computation. Or No label of ft^2 . 	* Incorrect approach with some concept of area and some mathematical computations correct. 	* Answer involves adding dimensions in some capacity. i.e. no concept of area. 
Criteria: Finding area of the living space	The correct answer if 1656 ft. The above calculations minus $(22' \times 22')$.			

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APPLIED II - Semester II

Title: Building a Fence	Level: IV	Level: III	Level: II	Level: I
Criteria: Find the price of brace	* Student answer of \$1.08 or \$1.09	* Student correctly uses Pythagorean thrm to get a value of 4.72 ft., but does not multiply by \$.23.	*Student incorrectly uses pythagorean theorem or no use of Pythagorean theorem, but multiplies some length by \$.23.	*Total incorrect calculations.
Criteria: Scale drawing	* A detailed, labeled scale drawing.	* Figure drawn to scale, but not labeled.	* Figure labeled but not drawn to scale.	* A sketch with no attempt of drawing the figure the figure to scale.
Criteria: Solution	* The student gives an answer of = \$109.98. (26x3x1.05) + (26x1.08)	* Correct, but incomplete calculations.	* Correct idea, but incorrect calculations.	* Incorrect thought process and no calculations.

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GEOMETRY - Sem II

Title: Minimizing Perimeter	Level: IV	Level: III	Level: II	Level: I
Criteria: Types and number of figures	* 4 different figures with one being a circle	* 4 figures and one is or is not a circle. Ex.: if there are 4 figures, yet 2 are the same figure (2 rect.) with or without a circle.	* Less than 4 figures with a circle.	* Less than 4 figures without a circle.
Criteria: Dimensions of the figures	* All shapes have dimensions that calculate to an area of 36 sq. in.	* One of the figures has incorrect dimensions	* More than one of the figures has incorrect dimensions	* All of the figures have incorrect dimensions
Criteria: Perimeter of figures	* Find perimeter of all 4 shapes correctly based on students' dimensions.	* One of the figures has incorrect perimeter based on students dimensions.	* More than one of the figures has incorrect perimeter based on student's dimension.	*All of the figures have incorrect perimeter based on the students dimensions.
Criteria: Conclusion	* Choosing circle as the minimum value, based on the calculations of the perimeter.	* Choosing the circle as the minimum perimeter with no evidence of calculations or *Choosing the student's figure with the smallest perimeter.	* Choosing the wrong figure from the given perimeters.	* No smallest perimeter chosen.

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STATISTICS - Sem II

Title: Shelf life of a Dairy Product	Level: IV	Level: III	Level: II	Level: I
Criteria: Sketch of the normal	* answer is:	* If all labels are correct, but the student labels the standard deviation (2.9) anywhere on the curve.	* If the values (10, 11 or 15) are incorrectly placed.	* No labels given, ie, only the normal curve is drawn.
Criteria: Converting to a z-score	$* Z = \frac{10-11}{2.9} = -.34$ and $Z = \frac{10-11}{2.9} = 1.38$	* An answer of +.34 and -1.38 * an answer of 6.21 or 11.21 * Improper rounding	* Use incorrect values in the formula which result in answers other than previously given, or answers of 5.83 or 7.55. * Only one z-score is found.	* No relevant computations
Criteria: find probability	* Accurate result is .1331 + .4162 = .5493 or any correct answer obtained from their z-score.	* Incorrectly reading the chart * Incorrect addition of correct values.	* The student does not add the probabilities together, or they manipulate them in some other way.	* The student answer is based on one boundary probability and the other is ignored.
Criteria:				

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