

M A T H	PERSUASIVE STATEMENT <i>Construct an argument and support it through the development and use of evidence (e.g. data, models, visuals, reasoning)</i>	INFORMATION REPORT <i>For a given topic, set of conditions or problem, develop and execute a plan to collect, analyze, and/or communicate quantitative information</i>	CRITIQUE OR REVIEW <i>Evaluate a claim or a possible solution to determine its validity and accuracy</i>
<i>Standards for Mathematical Practices to Consider in Your Task Design: 1, 3, 4, 5, 6</i>			
T A S K S	<i>Anchor Standards for Writing to Consider in Your Task Design:</i> 1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. 4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	<i>Anchor Standards for Writing to Consider in Your Task Design:</i> 2. Write informative/ explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content. 4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	<i>Anchor Standards for Writing to Consider in Your Task Design</i> 1. See Standard in the Persuasive Statement column. 2. See Standard in the Information Report column 4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
G E O M E T R Y	<p>INFORMATION REPORT (K): Teacher holds up a playground scene or take the students out for a field trip to the school playground equipment. Each group has a playground scene, crayons, pencils or markers, and paper. Pick shape(s) in the playground. Draw a picture of the shape(s) you found. What is/are the names? How do you know that shape? Describe the parts and attributes for each shape.</p> <p>PERSUASIVE STATEMENT (GR. 4): You and a small group of your friends are designing a playground with 1,200 feet of fencing. Identify the age of the children that will play on it as well as special considerations (e.g.-handicap accessibility, water sources, and natural materials). Create at least three play areas within that space (e.g.- sandbox, climbers, bridges and ramps, water play, tree house) and present your proposal to a panel of city planners for consideration. The written plan must include who the playground is designed for, dimensions and area for each play area within the playground, and why your playground should be selected to construct. Here are sample playgrounds to inspire you. Resource 1; Resource 2; Resource 3</p>		
A L G E B R A	<p>INFORMATION REPORT (GR. 6): Look at the price of homes in a local neighborhood. Based on your research of other homes, square footage and price, create a report for Chamber of Commerce including: two histograms – one by price and one by square footage to get a feeling for what’s for sale. Select a radius so that you get data for at least 30 homes (noting the square footage and asking price for each). Summarize the price of homes in your neighborhood by using and interpreting the mean, median, and interquartile range. Summarize the square footage of homes in your neighborhood by using and interpreting the mean, median, and interquartile range. Determine the typical price per square foot of a home in this neighborhood.</p> <p>CRITIQUE/REVIEW (GR. 8): You are interested in purchasing a home from an “up and coming” neighborhood. What’s your best choice of homes on the market? (Note: a website such as Trulia has details you will need.) DATA SET #1: Assemble the data: home, square footage, date of construction Sketch and find the equation for a linear model that predicts price from size. DATA SET #2: Find the subset of the data (homes) that are acceptable to you based on one key factor. (Possible considerations may include: updates/renovations, crime rate, transportation access, local access to parks and stores, proximity to family and friends.) Recompute the price per square foot based on this subset. Sketch a linear model for Data Set #2 as a basis for the comparison. Compare the two datasets. Select a home and produce a written offer based on your data. Make an argument to support why that price is reasonable based on your analysis.</p>		

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<p>PERSUASIVE STATEMENT (Gr. 1) Disease Does hand washing really keep you from getting sick? When you wash your hands, you are supposed to wash for a long time (singing the “Happy Birthday Song” twice). Organize and represent the data about students hand washing and the number of days they missed school in a year from being sick. Make a helpful flyer using your data to promote proper hand washing.</p> <p>CRITIQUE (Pre-Calculus): On a college campus of 5000 students, a single student returned to campus after the holiday break with a highly contagious disease. The infirmary is keeping track of the number of students who have been diagnosed with the disease.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Day</th> <th>Number of Infected Students</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>2</td> <td>4</td> </tr> <tr> <td>3</td> <td>8</td> </tr> <tr> <td>4</td> <td>22</td> </tr> <tr> <td>5</td> <td>44</td> </tr> <tr> <td>6</td> <td>92</td> </tr> <tr> <td>7</td> <td>175</td> </tr> </tbody> </table> <p>Several models have been proposed for predicting the spread of the disease based on the data. If 20% of the students become infected, the college administration will close the school sending all students home. Which prediction model should the administration adopt? Recommend a model and explain why you chose it using mathematical reasoning.</p>				Day	Number of Infected Students	1	2	2	4	3	8	4	22	5	44	6	92	7	175
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