END OF THE YEAR
Math Choice board

Name: _____

due date: _____

Choose activities from the project menu below that equal <u>$10 or more</u>.
Shade in each box to show which activities you completed.

Standards	Appetizers $1	Entrées $5	Desserts $3	Project Proposal
Ratios & Proportions Analyze proportional relationships and use them to solve real-world and mathematical problems.	**Spinning Ratios** *7.RP.A.3* Create a six section spinner with a different fraction in each section. Spin the spinner using a paperclip and pencil twice. Write a real-world unit rate word problem based on the numbers you spun. Then solve the word problem using a proportion. Do this three times.	**Retail or Not** *7.RP.A.2* You love getting the best deal possible. Look up the prices of 15 food items from a retail store (Smiths, Albertsons, Kroger, etc.) and a bulk supplier (Sam's Club, Costco, etc.). Calculate the unit price using a proportion in order to determine where you should shop for each item. Create a visual to showcase your findings (i.e. Prezi, PowerPoint, poster, chart, etc.).	**Coloring Page** *7.RP.A.1* Create your own "Paint by Numbers" coloring page based on finding the unit rate using ratios of fractions. You must include a minimum of 15 word problems that are solved using proportions. Don't forget to include a key. **HINT**: Make a photocopy of your coloring page.	Not interested in doing any of the projects here? Create your own project using the project proposal form and present it to your teacher. Once your project is approved, your teacher will determine how many points your project is worth.
Statistics & Probability • Use random sampling to draw inferences about a population. • draw informal comparative inferences about two populations. • Investigate chance processes and develop, use, and evaluate probability models.	**Book Jacket** *7.SP.A.2* Choose a book from the school library. Next, randomly choose 10 pages then count the number of words from each page. Finally, estimate the mean word length for the entire book based on your sample. Create a book jacket which includes the cover of your book and all of your calculations on the back.	**Roster** *7.SP.B.3* Your friend is deciding which sport to play. Research and create a roster that includes the weight of each professional football and baseball player in your area. Also include the mean and mean absolute derivation (MAD) of the players from each sport. How many baseball players weigh less than the thinnest football player? If your friend weighs 180 pounds, which sport would you suggest he play?	**Stations** *7.SP.C.6* Create three probability math stations where students collect, identify the long-run relative frequency, and predict the approximate relative frequency based on the data collected. You will need to write directions and create a data organizer for each station. To help students, complete all three stations yourself.	
Geometry • Draw, construct and describe geometrical figures and describe the relationships between them. • Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	**Hieroglyphs** *7.G.B.5* Create a hieroglyphs to represent each of the geometric vocabulary words: supplementary angles, complementary angles, vertical angles, adjacent angles, alternate interior angles, alternate exterior angles, transversal, and parallel lines. Create a key that includes the symbol, name, and definition of each geometric term.	**Dream House** *7.G.A.1* You are an architect and have been hired to create a 10 room house. To help you plan, create a table which shows the scaled dimensions and area of each room and the actual dimensions. Use the scale 1 cm = 2.5 ft. Then create a blueprint to help your client visualize your design.	**Sandcastle** *7.G.B.6* Draw blueprints for two complex sand castles using a variety of prisms (triangular and rectangular). Each castle should contain a minimum of 10 three-dimensional objects. Calculate of the volume of each sandcastle to determine which sand castle has the greater volume.	

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Standards	Appetizers $1	Entrées $5	Desserts $3	Project Proposal
Number System Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	**Murder Mystery** *7.NS.A.3* Write your own murder mystery where the main character cracks the case by finding and solving clues that requires him to solve problems involving the four operations with rational numbers.	**Science Journal** *7.NS.A.1* Look up the freezing points of 15 liquids. Record the temperature at which each liquid becomes a solid. If glycerol has a freezing point of 17.8 degrees Celsius, calculate how many more degrees the temperature must drop in order for the other liquids to freeze. Graph each problem on a number line. Create a journal to record all of your results.	**Scavenger Hunt** *7.NS.A.2* Create your own multiplication and division of rational numbers scavenger hunt that ultimately reveals a hidden message. Your scavenger hunt must included a minimum of 15 problems and a key!	Not interested in doing any of the projects here? Create your own project using the project proposal form and present it to your teacher. Once your project is approved, your teacher will determine how many points your project is worth.
Expressions & Equations • Use properties of operations to generate equivalent expressions. • Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	**Puzzle** *7.EE.A.4* Create five two-piece puzzles where players have to match multi-step inequalities with their corresponding number lines.	**Sales Commission Table** *7.EE.A.3* You are a car salesman and make a 15% commission on each car you sale before taxes. Look up the prices of 15 different cars online or in your local newspaper. Assuming that the prices listed include a 8% sales tax, what would your potential commission be for each car? Create a table that includes the car make/model, cost, taxes, and potential commission of each car.	**Maze** *7.EE.A.1* Create your own linear expressions maze where players must successfully combine the correct one and two variable expressions in order to reach the end of the maze. Your maze should include a minimum of 15 expressions. Include a key that shows the correct route (HINT: make a photocopy of your maze and highlight the correct route).	

END OF THE YEAR
Project Proposal

Name: _____

date: _____

What product will you create? _____ **Standard Addressed**: _____

Write a detailed description of your project: _____

_____

_____

How many points do you feel your project should be worth? *Circle one* Appetizer ($1) Entrée ($5) Dessert ($3)

Why do you want to create this project?

_____

_____

Teacher Use Only

Approval Decision : Not Approved Approved

Modifications to Project: _____

_____

Project Level : Appetizer ($1) Entrée ($5) Dessert ($3)

END OF THE YEAR

project rubric

Name: _____

Score: _____

CATEGORY	Exceeds 4	Meets 3	Approaches 2	Emergent 1
Required Elements	Student included more information than what was necessary. Additional details and/or components were added.	Student included all of the information that was required.	Almost all of the information that was required is included. One part or element is missing or incomplete.	Student included some information that was required but several important components are missing.
Accuracy	All math computations are accurate and absolutely no errors are present.	Most of the math computations are accurate but there are one or two small errors.	There are two to four small math computation errors or one major error present.	There are many math computation errors, and the student has not shown mastery.
Mastery	It is obvious that the student has an in-depth and extensive understanding of the math concept. The student can accurately answer all questions and explains his/her understanding in great detail.	The student has a strong understanding of the math concept and has shown mastery.	The student has a basic understanding of the math concept, and the work completed does not show mastery.	The student has not shown mastery of the math concept and cannot answer the majority of questions satisfactorily.
Originality	The project shows an exceptional degree of creativity and divergent thinking.	A lot of student creativity is present.	The project shows some creativity but parts were inspired by the designs or ideas of others.	The project lacks overall creativity.
Neatness & Attractiveness	The project is exceptionally attractive in terms of design, layout, neatness, and overall appearance.	The project is attractive in terms of design, layout, neatness, and overall appearance.	The project is somewhat attractive. More time could have been spent on the overall appearance and presentation of the project.	The overall appearance is not attractive. The project looks rushed and does not show the student's best effort.

END OF THE YEAR

presentation rubric

Name: _____

Score: _____

CATEGORY	Exceeds 4	Meets 3	Approaches 2	Emergent 1
Preparedness	Student is completely prepared and has obviously rehearsed.	Student seems pretty prepared but might have needed a couple more rehearsals.	The student is somewhat prepared, but it is clear that rehearsal was lacking.	Student does not seem at all prepared to present.
Answers Questions	The student can accurately answer all questions and explains his or her understanding in great detail.	The student is able to answer all questions posed accurately.	The student is unable to explain his or her thinking to all of the questions asked.	The student cannot answer the majority of questions satisfactorily.
Explains Thinking and Shows Mastery	Shows an advanced understanding of the math concept and provides an in depth explanation of his or her thinking.	Shows a good understanding of the math concept and clearly shared his or her thinking.	Additional practice is necessary for mastery. Student struggled at times with explaining his or her thinking.	Does not show mastery and is unable to explain his or her thinking.
Posture, Eye Contact, and Volume	Stands up straight, looks relaxed and confident. Establishes eye contact with everyone in the room during the presentation, and the volume is loud enough to be heard by all audience members throughout the presentation.	Stands up straight and establishes eye contact with everyone in the room during the presentation, and the volume is loud enough to be heard by all audience members.	Sometimes stands up straight and establishes eye contact. Occasionally, the volume is not loud enough to be heard by all audience members.	Slouches and/or does not look at people during the presentation. The volume is often too soft to be heard by all audience members.
Use of Visual Aid	Student explains and seamlessly integrates his/her visual aid into the presentation and uses it to make the presentation better.	Student explains and integrates his/her visual aid into the presentation and uses it to make the presentation better.	Student refers to his/her visual aid during presentation but it does not add to the presentation.	Student never refers to the visual aid OR the visual aid chosen detracts from the presentation.