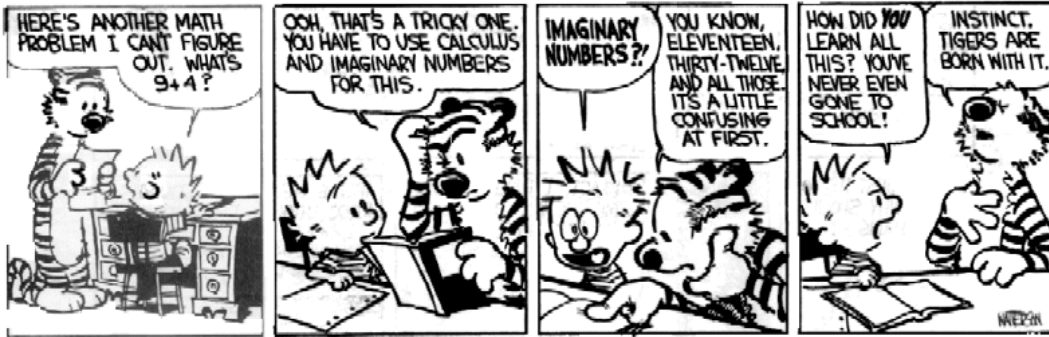


Due date is 1 week BEFORE marks close. No late projects will be accepted. **NO EXCEPTIONS.**

Extra Credit Math Projects

Complete one of the following projects. It will count as an additional QUIZ grade.

1) Draw a cartoon



The comic strip must:

- Contain 8 panels (Calvin and Hobbes above has 4 panels).
- Explain or demonstrate a recent topic or concept.
- Have clearly drawn, unique characters (ones YOU make up).
- Be neat and presentable on good quality paper (NOT notebook paper).
This is a FINISHED product.

The cartoon will be graded on:

- Math content – a topic we have covered in math this year with an accurate and correct explanation.
- Creativity – unique, well drawn characters (not copyrighted ones!) with some humor or drama in the wording. Cartoon should generate interest in the subject.
- Neatness – pictures should be well drawn and neat AND words should be written neatly or typed. Spelling and punctuation counts, so get someone to proofread your work.
- Presentation – paper should NOT be notebook paper or torn. Cartoon should be on clean paper. Finished product should be mounted on a colorful background paper, like construction paper, or some other unique presentation.

GRADING RUBRIC on the back of this page.

Due date is 1 week BEFORE marks close. No late projects will be accepted. **NO EXCEPTIONS.**

Name _____ Title of Project _____

	5	4	3	2	1	0
Math Content	Topic is on grade level and accurately depicted.	Topic is on grade level, but contains an error.	Topic is on grade level, but contains more than 1 error.	Topic is below grade level and contains an error.	Topic is below grade level and contains more than 1 error.	Topic is not math related.
Creativity	Characters are unique and well created. Wording is entertaining and interesting.	Characters are somewhat unique and well created. Wording is entertaining and interesting.	Characters are somewhat unique and well created. Wording is somewhat entertaining and interesting.	Characters are not unique. Wording is somewhat entertaining and interesting.	Characters are not unique. Wording is dry and not in the spirit of a cartoon.	Characters are not unique. Wording is not original.
Neatness	Drawings and words are neat and legible.	Drawings and words are somewhat neat and legible.	Drawings are neat, but some words are not legible.	Drawings are a bit sloppy and many words are not legible.	Drawings are a bit sloppy and most words are not legible.	Drawings are sloppy and words are illegible.
Presentation	Cartoon is on nice paper and large enough to read from arms length. Cartoon is presented on a colorful background (construction paper) or some other creative presentation.	Cartoon is on nice paper and large enough to read from arms length	Cartoon is on nice paper and large enough to read from less than arms length	Cartoon is large enough to read from less than arms length, but paper is ragged.	Cartoon is a bit small and paper is ragged.	Cartoon is done on notebook paper and no apparent care was made for it to look good.

Total points _____ x 5 = _____ %

This grading rubric **MUST** be handed in with your project.

Due date is 1 week BEFORE marks close. No late projects will be accepted. **NO EXCEPTIONS.**

2) Report on a mathematician

Write a research report on a mathematician. Here is a partial list of mathematicians:

- Al-Khwarizmi
- Archimedes
- Appollonius
- Aryabhata
- Bernouilli
- Boole
- Cantor
- Cayley
- Ceva
- Cauchy
- Descartes
- Eratosthenes
- Euclid
- Euler
- Fermat
- Fourier
- Galois
- Gauss
- Gödel
- Hamilton
- Hariot
- Hilbert
- Hypatia
- Jacobi
- Karadimos
- Kepler
- Khayyam
- Klein
- LaGrange
- Legendre
- Leibnitz
- Lobechevsky
- Lovelace
- Menelaus
- Mersenne
- Neumann
- Newton
- Noether
- Pascal
- Poincare
- Ptolemy
- Pythagoras
- Riemann
- Russel
- Sierpinski
- Turing
- Van Ceulen
- Weierstrass

The report must:

- a) Be typed, double-spaced, 12 point font.
- b) Be 2 or more pages.
- c) Include a picture or likeness of the mathematician
- d) Have the following sections in the following order:
 - i. Cover page (including title, author's name, date, period)
 - ii. Life history (dates of birth and death, place of residence, anecdotal stories [a short account of an interesting or humorous incident], ...)
 - iii. Mathematical discoveries
 - iv. Contributions to society (how the discoveries benefit humankind)
 - v. Bibliography (list of sources)
- e) Must NOT be plagiarized. Plagiarism is words (or thoughts) that are copied from another person's work and will result in a student receiving an additional zero.

GRADING RUBRIC on the back of this page.

Due date is 1 week BEFORE marks close. No late projects will be accepted. **NO EXCEPTIONS.**

Name _____ Title of Project _____

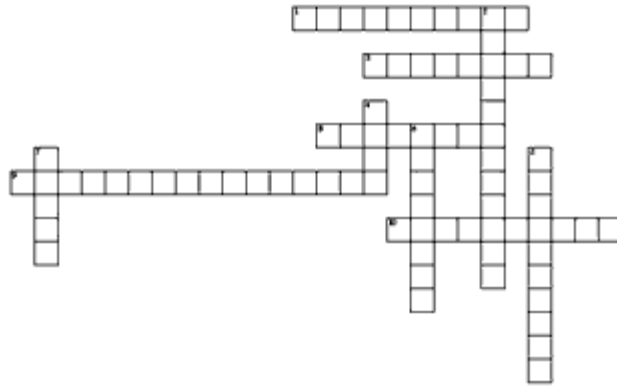
	5	4	3	2	1	0
Math Content	Topic is on grade level and accurately depicted.	Topic is on grade level, but contains an error.	Topic is on grade level, but contains more than 1 error.	Topic is below grade level and contains an error.	Topic is below grade level and contains more than 1 error.	Topic is not math related.
Composition	Writing is original and readable. All resources are cited.	Writing is original and somewhat readable. Resources are cited.	Writing contains some grammatical errors, but is mostly readable. Resources are cited.	Writing contains many grammatical errors, but is still readable. Resources are cited.	Writing contains many grammatical errors, but is still readable. Not all resources are cited.	Writing contains many grammatical errors, and is not readable. Not all resources are cited.
Content	All required parts of the paper are included and well developed.	All required parts of the paper are included but 1-2 sections are not well developed.	1 of the required parts of the paper is missing.	2 of the required parts of the paper are missing.	1 of the required parts of the paper is missing, but sections are well developed.	2 of the required parts of the paper are missing, and other sections are not well developed.
Presentation	Report's presentation follows all requirements and of the proper length.	Report's presentation follows all requirements, but is not of the proper length.	Report's presentation follows some of the requirements, and is of the proper length.	Report's presentation follows some of the requirements, and is of the proper length.	Report's presentation follows some of the requirements, and is not of the proper length.	Report's presentation follows very few of the requirements, and is not of the proper length.

Total points _____ x 5 = _____ %

This grading rubric **MUST** be handed in with your project.

Due date is 1 week BEFORE marks close. No late projects will be accepted. **NO EXCEPTIONS.**

3) Create A Puzzle



Create a word puzzle. The puzzle should:

- Be a criss-cross variety as seen above.
- Have a final copy that fits on an 8 ½“ by 11”
- Have a list of 25 clues which are numbered.
- Have answers which are vocabulary words from our textbook.
- Have understandable clues that use proper grammar.
- Have one clean copy turned in.
- Have one answer key given to the teacher only.

GRADING RUBRIC on the back of this page.

Due date is 1 week BEFORE marks close. No late projects will be accepted. **NO EXCEPTIONS.**

Name _____ Title of Project _____

	5	4	3	2	1	0
Math Content	Topic is on grade level and accurately depicted.	Topic is on grade level, but contains an error.	Topic is on grade level, but contains more than 1 error.	Topic is below grade level, but contains an error.	Topic is below grade level, but contains more than 1 error.	Topic is not math related.
Composition	Clues are well-written and understandable . Several are unique and interesting,	Clues are well-written and understandable.	A few clues are confusing, but most are understandable .	Some clues are confusing, but many are understandable.	Most clues are not very understandable .	Clues are mostly confusing and not very clear.
Content	Puzzle contains at least 25 words which are vocabulary from our textbook.	Puzzle contains less than 25 words which are vocabulary from our textbook.	Puzzle contains less than 22 words which are vocabulary from our textbook. Or some words are not math related.	Puzzle contains less than 19 words which are vocabulary from our textbook. Or some words are not math related.	Puzzle contains less than 16 words which are vocabulary from our textbook. Or some words are not math related.	Puzzle contains less than 13 words which are vocabulary from our textbook. Or some words are not math related.
Presentation	Puzzle is well drawn and neat. Clues are typed, with no misspellings or are handwritten neatly. Answer key is correct.	Puzzle is well drawn and neat. Clues are typed (or neatly handwritten), with only a few misspellings. Answer key is correct.	Puzzle is well drawn and neat. Clues are typed (or neatly handwritten), but with some misspellings. Answer key may have some errors.	Puzzle is somewhat sloppy. Clues are typed (or handwritten), but with some misspellings. Answer key may have some errors.	Puzzle is sloppy. Clues are typed (or handwritten), but with many errors. Answer key may have some errors.	Puzzle is very sloppy. Clues are typed (or handwritten), but with many errors. Answer key may have many errors.

Total points _____ x 5 = _____ %

This grading rubric **MUST** be handed in with your project.

Due date is 1 week BEFORE marks close. No late projects will be accepted. **NO EXCEPTIONS.**

- 4) Make one of the following math mobiles
- a) *Geometric shapes mobile* – durable colorful replicas of 3-dimensional shapes including a cube, rectangular prism, cone, cylinder and a sphere. The names of your shapes must be included.
 - b) *Order of operations mobile* – definition of Order of Operations. Your mobile must include examples of solving expressions and/or using Order of Operations, including at least one equation containing a variable. When solving for a variable, remember to keep your equation (and mobile) balanced.
 - c) You may choose another math topic for your mobile, but it **MUST** be preapproved by Mrs. Fenlon BEFORE you begin the project. Be ready to specifically tell me the items that you will be included on your mobile.

The mobile must:

- Be neat and presentable, on good quality paper (NOT notebook paper). This is a FINISHED product.
- Be durable and sturdy enough to hang in our classroom. You may want to use a coat hanger and/or wooden dowels as part of your construction.
- Include at least the suggested items mentioned above.

The mobile will be graded on:

- Math content – your mobile must be mathematically accurate and correct.
- Creativity – unique, well drawn colorful geometric shapes and/or interesting equations. Your mobile should generate interest in the math topic.
- Neatness – your mobile must be neat AND words should be written neatly or typed. Spelling counts!
- Presentation – paper should NOT be notebook paper or torn. Finished product should be appealing to the eye. It will be hung in our classroom and should complement the room.

GRADING RUBRIC on the back of this page.

Due date is 1 week BEFORE marks close. No late projects will be accepted. **NO EXCEPTIONS.**

Name _____ Title of Project _____

	5	4	3	2	1	0
Math Content	Topic is on grade level and accurately depicted.	Topic is on grade level, but contains an error.	Topic is on grade level, but contains more than 1 error.	Topic is below grade level and contains an error.	Topic is below grade level and contains more than 1 error.	Topic is not math related.
Creativity	Mobile is well created. Is unique and interesting.	Mobile is somewhat unique and well created.	Mobile is somewhat unique and well created and shows some effort toward creativity.	Mobile is somewhat unique and well created and shows little effort toward creativity.	Mobile is not unique or well created but shows some effort toward creativity.	Mobile is not unique or well created and shows no effort toward creativity.
Neatness	Mobile items and words (equations) are neat and legible.	Mobile items and words (equations) are somewhat neat and legible.	Mobile items are neat but some words (equations) are not legible.	Mobile items are a bit sloppy and many words (equations) are not legible.	Mobile items are a bit sloppy and most words (equations) are not legible.	Mobile items are sloppy and words (equations) are illegible.
Presentation	Mobile is constructed well, items (including words and equations) are on nice paper and large enough to see and read while hanging. Presentation is creative.	Mobile is constructed well, items (including words and equations) are on nice paper and large enough to see and read while hanging.	Mobile is constructed well, items (including words and equations) are on nice paper but difficult to see and read while hanging.	Mobile is large enough to see and read while hanging, but items are ragged and not constructed well.	Mobile is a bit difficult to see and read while hanging, and items are ragged and not constructed well.	Mobile is a difficult to see and read while hanging, and items are ragged and not constructed well.

Total points _____ x 5 = _____ %

This grading rubric **MUST** be handed in with your project.