

Journal Activities for Math

1. Instead of opening the lesson with warm-up problems ask each student to write down a question related to the previous day's lesson.
2. Instead of asking questions about what students have studied give answers and have students write the questions.
3. Instead of giving information about a problem situation, give students the problem situation and ask them to write down appropriate information.
4. Instead of giving students a problem to be solved give students the solution and have them write a problem.
5. Instead of giving directions for a project or activity, show students a completed project or activity and have them write down procedures to be followed when completing such an activity.
6. Instead of summarizing a lesson yourself, ask student to write down the most important idea from the lesson.
7. Instead of just giving a few practice exercises for homework, ask students to write a letter to their parents or a younger brother or sister in which they explain some mathematical process such as factoring the difference of two squares.
8. Instead of asking students to take notes have them write a factual account of what happened in class as if they were writing as a reporter.
9. Instead of asking students to complete a worksheet that reviews a major concept of a chapter, ask them to chart a study guide that can be used by the entire class.
10. Instead of explaining the objectives or major ideas of a new chapter ask students to write all that they think they already know about the topic.
11. Instead of having students solve all problems numerically, ask them to write a description of how they solved the problems. A generic prompt might be as follows:
Tell which solution method you chose.
Tell why you chose that method.
What conclusions can you draw based on your solution?

Journal Topics for Math

1. Write a rule for estimating products with three factors.
2. Pretend that you are a rational number. Write a letter to a friend who hasn't seen you for a number of years. Tell the friend how to recognize you when you meet at the airport.
3. Keep a leaning log for this chapter. In you log include notes on new ideas, old ideas, and new techniques or skills that you have learned.
4. Write a recipe that tells how to multiply or divide a number by 100.

5. Write a paragraph entitled "Who Am I?" Give clues that will lead to the identity of a certain kind of geometric figure.
6. Write a plan that tells how you can use addition to find 6×0.25 .
7. Make a sequence chart in which you list the steps for graphing an ordered pair of numbers.
8. Write a letter to your English teacher in which you explain the basic ideas of the Pythagorean Theorem.
9. Write a short paragraph in which you contrast finding the perimeter of a figure with finding its areas.
10. Suppose you are an investigative reporter about to interview a polygon. Make a list of five questions that you would ask.
11. Write a set of instructions telling someone how to read a sales tax table.
12. Write a letter to a friend explaining why line graphs are used to show changes in data overtime.
13. Write a recipe telling how to convert standard notation to scientific notation.
14. Write a procedure that tells how to find the number of fluid ounces in one gallon.
15. Write a description of a space figure. Read your description to a classmate and have him draw your figure.
16. Pretend you are a surgeon. Write a description of the "surgical procedure" to simplify a fraction.
17. Write a problem that you would solve using a calculator.
18. Pretend you are Pythagoras. Write a short paragraph in which you explain "your" rules for right triangles.
19. Write a rule for finding the sign of a product without multiplying first.
20. Pretend you are a point on a coordinate plane. Write an invitation to a party in which you include directions to your location.

More Topic Ideas for Math

1. Create your own shape and give it a name. Write the history of your shape and explain how it functions in the world of math. Also, convince students that this shape is important to learn about. Make sure you include a drawing of your shape.
2. Summarize the major concepts of this chapter and how they fit together. This will be your study guide for the quiz on _____.
3. In this chapter, what has been the hardest concept to learn? Why is it difficult or what don't you still understand about it? What is the easiest thing in the chapter? Again, explain what you find easy about it.
4. Write a letter to a 2nd grader explaining why math is important. You may want to include pictures to get your point across. Remember, you need to write this quite simply so that a 2nd grader will understand.

5. An alien has just landed on earth and has enrolled in this class. It doesn't speak English very well but it can read. Please summarize all that we have done so far (this year or in this chapter, etc). You must include at least _____ terms we have studied.
6. Write your own story problem. Give some background to the problem and then include at least four questions to solve. You must solve it as well once you finish writing it. The problem must use functions we have been studying recently.
7. You have just been asked to come and work at _____. Explain what your math background is and how you will be able to benefit this company. Be sure to highlight your strengths and minimize your weaknesses in math.
8. So often, teachers hear students ask, "Why do we have to learn this?" In this letter, I want you to persuade me that math is unimportant. Tell me how you will survive without having a math background and how you will survive without the technology that math has provided.

MATH OUTSIDE OF THE CLASSROOM:

1. How often have you heard it said, "You need math in every career"? Do you? Research two different jobs in which you may or may not need math. List at least a dozen reasons why an employee at each job does or does not need train in math. Finally, write a letter to your school board in which you argue why or why not the math training in your school meets the needs of students preparing for the two jobs.
2. By interviewing an adult(s) in the workplace, discover how math is used beyond the school walls. Present the results of your interview to the class.
3. Compile an accurate and comprehensive manual of sports records and statistics for your school. Include in the manual a statistical comparison of your school's records and the records of one other school in your conference.
4. Study trajectory by researching the arcs of different objects. Videotape objects as they arc through the air (flaming arrow, basketball, shot put, spitball). Use the videotape to plot the arcs on the wall. Write a presentation of your research.
5. Explore the world of business math. Select one of the ways math is used in business: bill calculation and collection; calculation of inventory and new orders; calculations involved in a decision to stock a new product; calculations involved in assessing when sale prices are profitable; calculations that are part of setting an annual advertising budget; etc. Then select a business in your community and interview the manager/owner regarding your topic. Write a report on the research and present the report to the class.