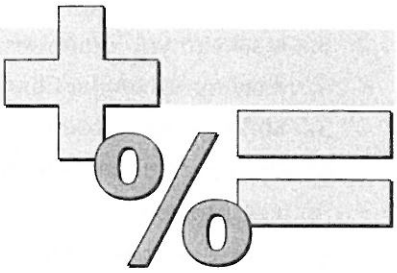
MATH:
TIERED THINKING PROMPTS—TIER 1



KNOWLEDGE

1. Name this numeral.
2. Count how many _____.
3. Sing the math facts to the tune for Farmer in the Dell.
4. Repeat this pattern.

COMPREHENSION

1. Match the numeral and set.
2. Point to a number greater than _____.
3. Draw a set of _____.
4. Demonstrate how many _____.
5. When do you use this sign?
6. Explain greater than and less than in your own words.
7. Use a number line to show _____.
8. Find another set of objects equal to this set.
9. On your individual board, write the answer to this problem.

APPLICATION

1. Label this problem.
2. Using what you have learned about this, how would you solve _____?
3. Demonstrate how fractions are used in music and sports.
4. Record the data on a graph.
5. Identify and solve a problem in which _____ is used.
6. How many examples can you list using measurement in real life situations?
7. Demonstrate another method that results in the number _____.
8. List 5 ways in which you have used mathematics in the past week outside of the classroom.
9. List the items on the graph in order from most to fewest.
10. List five current movies or television programs. Survey your classmates to tally their favorite. Use mathematical terminology to tell three things you learned.
11. Construct a graph to show your survey results.
12. Find two things in this room whose measurements are _____.
13. Use these manipulatives to illustrate three fractions.

ANALYSIS

1. Add one to each number. Tell me three things that you notice.
2. Determine the pattern.

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3. How can you group these so they will _____?
4. How many similarities can you list for addition and multiplication or division and subtraction?
5. Make a graph that compares _____ to _____.
6. Prepare a chart that categorizes _____ in two or more ways.
7. The problem is _____. Show three ways to solve it.
8. Using these objects, create as many mathematical problems as you can.
9. Use math terminology to write a description of this polygon.
10. Tell me six things about the number _____.
11. Demonstrate how to work this problem to someone having trouble.
12. Determine two ways to check the answer to this problem.
13. Write and illustrate a math story problem demonstrating _____.
14. Complete this analogy and create 3 additional math-related analogies: *Three is to a triangle as four is to* _____.
15. Identify the error in this problem and explain how to correct it.

SYNTHESIS

1. Demonstrate how to get the same total using different sets.
2. Develop a rule explaining what happens when using all even numbers in subtraction problems and what happens using both even and odd numbers.
3. Predict what would happen in shopping malls if all money was in coins.
4. Reconstruct the problem so the solution is greater than _____.
5. Create a new polygon and explain its attributes.
6. Use these manipulatives to explain subtraction to a younger student.
7. Create a presentation for the class demonstrating _____.
8. Draw a flow chart explaining the steps you used to complete this problem.
9. Design a test to determine if students can apply this math concept.
10. List and prioritize the top ten reasons to take math classes in school.

EVALUATION

1. How can this problem can be improved or completed differently? Defend your ideas.
2. Pose criteria, and evaluate your own strengths and weaknesses in math.
3. Defend why you think this will work.
4. Critique this math story problem for clarity and interest.
5. Grade this math procedure and defend your grading.
6. Defend how your way to solve the problem is better than this way.
7. Create five problems, rate them according to difficulty, and defend your ratings.
8. On a scale of one to five, judge how well you think you understand _____. Explain why.
9. Ask three students to complete the math test you developed. Based upon their responses, evaluate the effectiveness of your test.

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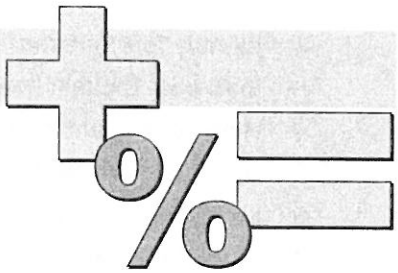
MATH:
TIERED THINKING PROMPTS—TIER 2



KNOWLEDGE

1. Name the _____.
2. Point to the denominator.
3. What is this sign?
4. Tell three facts about this problem.

COMPREHENSION

1. Define _____.
2. Calculate _____.
3. In your own words, tell how to _____.
4. What is the function of this sign?
5. What is the value of _____?
6. Use this formula to demonstrate _____.
7. Explain this math concept in your own words.
8. On your individual board, demonstrate how to complete this problem.
9. Explain the order of operations.

APPLICATION

1. Label all of the parts of this problem.
2. Arrange results according to _____.
3. How could you apply what you learned to solve _____?
4. Using mathematical terminology, demonstrate how geometry is used in sports.
5. Convert the data on this graph to _____.
6. Solve a problem using this formula.
7. Using multiples, construct a model _____.
8. How many examples can you list where area is used in real life situations?
9. Write another problem using this mathematical principle.
10. Working with one other person, how many ways can you list in which you have used mathematics in the past week outside of the classroom?
11. How many things can you identify in this room that use metric measurements?
12. How many examples can you list of foods that illustrate fractions, such as a cracker separated into halves?
13. Using graph paper, complete a scale drawing of a key item or place.

ANALYSIS

1. Construct a graph that contrasts _____, _____, and _____.
2. The problem is _____. How many ways can you figure out to solve it?

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3. Identify four different fractions any two of which could be divided to result in a quotient less than one. Explain how you determined those fractions.
4. What else would you need to know to solve this?
5. Using precise mathematical language, write a description of this common object.
6. Using precise mathematical language, list six things about the number _____; about this formula.
7. In your own words, explain to someone having trouble how to apply this math concept.
8. Create a flow chart to illustrate this math process.
9. Consider these three problems. In which one is the order of operations most important? Why?
10. How many ways can you illustrate and label showing how math is used in a school bus?
11. Identify the error in this problem and explain how to correct it.
12. How can you compare and contrast fractions and percentages?
13. Complete this analogy and create 3 additional math-related analogies. *Ten is to forty as a quarter is to* _____.
14. Write and illustrate a math story problem incorporating _____ and _____.

SYNTHESIS

1. Predict the results if _____ changes to _____.
2. Forecast what would happen to stock markets if _____.
3. Reconstruct the problem so that it _____.
4. Create a new _____.
5. Design a test to determine if students understand the problem or math concept.
6. Develop a procedure to teach _____ to a younger student.
7. Create a presentation for the class about a related mathematical concept.
8. Design a diagram identifying the most important elements of this process.
9. Draw a flow chart explaining the steps you used to complete this problem.
10. Illustrate how negative numbers affect this operation.
11. Create a rubric to evaluate this math problem.

EVALUATION

1. Use the rubric you created to evaluate this math response. How well did it work?
2. Defend three ways this problem can be improved or completed differently.
3. Judge the best use of _____ in _____.
4. Pose criteria, and evaluate your own strengths and weaknesses in math.
5. Defend why you think this will work.
6. Evaluate your prediction.
7. Defend your different way to solve the problem.
8. Create five problems using _____. Rate them according to difficulty, and defend your ratings.
9. On a scale of one to ten, judge how well you think you understand _____. Explain why.
10. Debate whether or not calculators should be used when taking standardized tests.

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