# Is it Fair to Trick Kids? A thinkLaw Math Lab

# thinkStarter

Family Feud is a game show. Two families compete. The host asks a survey question that was asked to a group of 100 people, such as, "Name the hour that



you get up on Sunday mornings." Contestants must guess the most popular response. The game continues until one family has guessed all the answers on the board, or until time runs out.

Answer these Family Feud-style questions.

If we surveyed 100 students in our school and asked them "What is the most common mistakes that students make on math tests?", what would be the #1 response?

1	
2	
3	

١f v	we surveyed 100 students in our school and asked them "What are the ways test makers try to trick kids on standardized math tests?", what would be the #1 response?
1	
2	
3	

# thinkStarter Summary

There are common mistakes that students make on math tests. The people who make tests use mistake analysis to help them write questions that will trick kids. **Mistake analysis** is when you spend time thinking critically about



mistakes. Is this fair? In this thinkLaw math lab, we will think more about mistake analysis and thinking like a test maker.

# What Would Joe Schmo Do?

Today we are going to think about Joe Schmo. Joe always falls for the trick answer. Joe does not read the directions carefully. Joes does not complete all the steps in a problem. We are going to think about the mistakes Joe may make on a math test.



## Question 1



For a concert, there are student tickets and adult tickets for sale. Of the total tickets  $\frac{39}{100}$  have been sold as student tickets and  $\frac{5}{10}$  as adult tickets. The rest of the tickets have not been sold. What fraction of the total number of tickets for the concert have not been sold?

١f ٧	If we surveyed 100 students in our school and asked them "What mistake would Joe Schmo make on this question?", what would be the #1 response?	
1		
2		
3		

Use these top three mistakes to write a multiple-choice question. Be sure to also include the correct response.

For <u>39</u> 100 have	For a concert, there are student tickets and adult tickets for sale. Of the total tickets $\frac{39}{100}$ have been sold as student tickets and $\frac{5}{10}$ as adult tickets. The rest of the tickets have not been sold. What fraction of the total number of tickets for the concert have not been sold?	
A		
В		
С		
D		



### Question 2

Rosa's favorite sports team has won 0.62 of its games this season. How can Rosa express this decimal as a fraction? Write the fraction in simplest form.



If we surveyed 100 students in our school and asked them "What mistake would Joe Schmo make on this question?", what would be the #1 response?	
1	
2	
3	

Use these top three mistakes to write a multiple-choice question. Be sure to also include the correct response.

R	Rosa's favorite sports team has won 0.62 of its games this season. How can Rosa express this decimal as a fraction? Write the fraction in simplest form.	
A		
В		
С		
D		

#### **Question 3**

Jessica keeps track of the number of books each student checks out from the library. How many students check out more than three books? Use the line plot to answer the question.

If we surveyed 100 students in our school and asked them "What mistake would Joe Schmo make on this question?", what would be the #1 response?

**Books Checked Out by Students** 



Number of Books

1	
2	



3

Use these top three mistakes to write a multiple-choice question. Be sure to also include the correct response.

Jessica keeps track of the number of books each student checks out from the library. How many students check out more than three books? Use the line plot to answer the question.	
Α	
В	
С	
D	

### Question 4

Mr. Seale graphs his students' favorite candy. The class has earned a candy party. All bowls of candy have the same amount to start with. Which two candies are likely to run out first? Use the graph to answer the question.



If we surveyed 100 students in our school and asked them "What mistake would Joe Schmo make on this question?", what would be the #1 response? 1

I	
2	
3	
Use	these top three mistakes to write a multiple-choice question. Be sure to also include

Use these top three mistakes to write a multiple-choice question. Be sure to also include the correct response.

Mr. Seale graphs his students' favorite candy. The class has earned a candy party. All bowls of candy have the same amount to start with. Which two candies are likely to run out first? Use the graph to answer the question.



A	
В	
С	
D	

### **Question 5**

The school building is 36 feet high. What is the height of the building in yards?



١f ٧	If we surveyed 100 students in our school and asked them "What mistake would Joe Schmo make on this question?", what would be the #1 response?	
1		
2		
3		

Use these top three mistakes to write a multiple-choice question. Be sure to also include the correct response.

	The school building is 36 feet high. What is the height of the building in yards?
Α	
В	
С	
D	

### Question 6

Which number correctly completes the subtraction sentence 5.0 – 3.25 = \_\_\_\_?

If we surveyed 100 students in our school and asked them "What mistake would Joe Schmo make on this question?", what would be the #1 response?		
1		
2		



3

Use these top three mistakes to write a multiple-choice question. Be sure to also include the correct response.

Which number correctly completes the subtraction sentence 5.0 – 3.25 =?		
A		
В		
С		
D		
	う	



What are the top 3 ways thinking like a test maker helps you take a standardized test?

1	
2	
3	

# thinkBigger

Do you think it is fair for test makers to use mistake analysis to trick kids?

What is the best argument for each side?

It is fair for test makers to use mistake analysis.	It is NOT fair for test makers to use mistake analysis.

