# Too Much Junk

## Decimals

**A THINKLAW MATH LAB**

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|---|---|
| OBJECTIVE | Thinkers will **add decimals** to determine if junk fees should be illegal. |

## Lesson Outline

1. In the thinkstarter, thinkers will consider the problems they would encounter if a field trip suddenly had fees added.
2. Thinkers will consider junk fees. Why do we have them? How do they work? Are they fair? Thinkers will learn that when it comes to junk fees, you need to use your math skills to move from a gut reaction to an informed opinion.
3. Thinkers will go through 3 examples of lawsuits companies are facing over fees. They will consider the best argument for both sides before calculating the final costs, including the fees. Thinkers will analyze the final costs to justify who should win the case.
4. In the thinkBigger, thinkers will consider a potential new rule from the Federal Trade Commission. The FTC wants companies to show you the total price of something right from the start. Thinkers will complete a public policy debate to consider every side of the issue.

# Indiana Academic Standards

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| **3.CA.1:** Fluently add and subtract multi-digit whole numbers using strategies and algorithms based on place value, properties of operations, and relationships between addition and subtraction. |
| **4.M.3:** Use the four operations to solve real-world problems involving distances, intervals of time, volumes, masses of objects, and money. Include addition and subtraction problems involving simple fractions and problems that require expressing measurements given in a larger unit in terms of a smaller unit. (E) |
| **5.CA.10:** Solve real-world problems involving addition, subtraction, multiplication, and division with decimals to hundredths including problems that involve money in decimal notation (e.g., by using equations, models or drawings, and strategies based on place value or properties of operations to represent the problem). (E) |
| E: Essential IDOE standards |

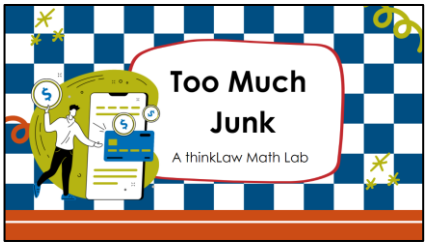
# Standards for Mathematical Practice

| | | | |
|---|---|---|---|
| **PS.1** Make sense of problems and persevere in solving them. | **PS.2** Reason abstractly and quantitatively. | **PS.3** Construct viable arguments and critique the reasoning of others . | **PS.4** Model with mathematics. |
| **PS.5** Use appropriate tools strategically. | **PS.6** Attend to precision. | **PS.7** Look for and make use of structure. | **PS.8** Look for and express regularity in repeating reasoning. |

# Lesson Materials

- thinkLaw Student Work pages
- Writing Utensils
- Calculators

## PowerPoint Presentation:




## Instructor's Note:

thinkLaw Math Labs have been created with 5 warm-up problems designed to serve multiple puposes: pre-assessment tool, a review tool, an activiation of learing, or a readiness tool.

The purpose of the warm-up section is to offer students a brief but effective practice session, lasting approximately 5-10 minutes. If students encounter difficulties with any of the problems, it's perfectly fine to proceed, as the Math Lab is structured to provide support and scaffold their learning.

Name _____

**Too Much Junk (Decimals)**

*A thinkLaw Math Lab Warm-Up*

1. An expression is shown. What is the value of the expression?

$10.15 + 5.02 \times 0.8 =$ 14.17

5.02 − 0.8 = 4.016

10.15 − 4.016 = 14.166

2. Ben swims 6.8 miles on Monday and 4.5 miles on Tuesday. How many miles did Ben swim altogether?

6.8 + 4.5 = 11.3

Answer: 11.3 miles

3. Delilah buys 5 notebooks for $1.50 each. She also buys a pack of pencils for $2.50. How much more money did Delilah spend on notebooks than pencils?

$1.50 × 5 = $7.50

$7.50 − $2.50 = $5.00

Answer: $5.00

4. During the first race, 12 people run a 1.4 mile race. During the second race, 6 people run a 2.5 mile race. How many more total miles were run during the first race compared to the second race?

12 × 1.4 = 16.8

6 × 2.5 = 15

16.8 − 15.0 = 1.8

Answer: 1.8 miles

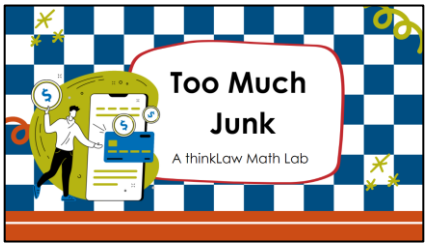
5. Multiply 5.20 x .75 = 3.9
What's the most common mistake that a student would make when answering that question?

Student answers may vary. Students may say that the most common mistake a student will make is to forget to put the decimal in the right spot in the answer.

In the slides provided, you'll find a designated prompt indicating where to incorporate the warm-up section with your students. The slide can also serve as an opportunity to review the answers to the warm-up problems together with your students before continueing on with the math lab.

For convenience, we recommend printing the warm-up and cool-down sections front to back on a single sheet of paper, facilitating easy access and organization during the Math Lab session.

## PowerPoint Presentation:




## Instructor's Note:

thinkLaw lessons are designed to be flexible. You may not complete this entire lesson. You may complete this lesson over a few days. thinkLaw lessons include many probing questions; you do not need to ask every questions. You have permission to use thinkLaw lessons in the manner that best fits your class.

## Probing Questions:

- What would you do if the cost of the field trip changed at the very last minute? Why?
- What would your family say if you called them and told them you needed more money for the field trip? Why do you think they would say that?
- Why would the teacher not tell you the total cost of the field trip from the beginning?
- How would you feel if this happened? Why would you feel this way?
- Have you ever had something like this happen? Have you ever thought you needed to pay one price, but you ended up needing to pay a higher price? What happened?
- Why do you think these fees are called "junk fees?" What do you think of when you hear the word junk? How does that impact your thinking when you hear the term junk fees?

Name _____

**Too Much Junk**

*A thinkLaw Math Lab*

**thinkStarter**


Imagine that your teacher had a sign in your classroom.

The day of the field trip, the teacher put up a new sign. The field trip has additional fees.


| What is the total cost of the field trip? | What problems would the surprise fees create? |
|---|---|
| $5 + $3 + $2 + $4 = $14 | Students thought that the trip would cost $5. The final cost of the trip with the fees is $14. Students did not likely bring enough money to pay for the field trip. |

**thinkStarter Summary**

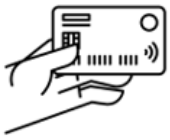
A **fee** is a charge. No one likes surprise fees. Surprise fees can create many problems. In our thinkLaw math lab today, we will look at surprise fees.

**Too Much Junk**

**Junk fees** are "hidden fees" or" surprise fees." These fees are unexpected or unfair charges that businesses add. The customers see a price for an item, but when they check out, the price is much higher because junk fees have been added.

**Junk Fee 1: Banking Fees**

(U.S. Consumer Financial Protection Bureau v. Bank of America, 2023)



John was at the store, ready to buy his favorite snacks. He reached for his bank card to pay, but the cashier's machine said the card was declined. John was confused. He tried the card again, but the machine still did not like his card.

It turned out that John did not have enough money in his bank account to pay for the snacks. John did not know this when he tried to make the purchase.

John's bank has a rule that if you tried to use your card but do not have enough money, they will charge you a $35 fee. This fee is called a **non-sufficient funds fee.**

How much do you think John should have to pay? Why?
Thinkers may say that John should pay the 35 dollar fee because that is the bank's rule.

| | |
|---|---|
| Bank of America charged their customers the non-sufficient every time the card was run. John tried to use the card twice because he did not know why the card was not working. | How much did John have to pay?<br><br>$35 + $35<br>= $70 |

Bank of America made a lot of money charging customers the same fee multiple times in one transaction. The U.S. Financial Protection Bureau sued Bank of America over these junk fees.

| What is the best argument Bank of America should win? | What is the best argument Bank of America should lose? |
|---|---|
| The bank has rules. When a customer runs their card but cannot pay the charge, the bank gives them a $35 fee. John ran his card two times, so he must pay two fees. | John did now know why his card was not working. He ran the card two times, but it was for the same charge. John should only need to pay one fee. |

**Instructor's Note:**
John had to pay the fee twice for the same mistake. So, thinkers should add $35 + $35 or multiply $35 by 2. Point out to thinkers that both approaches will get you the same answer.

**Probing Questions:**

- What are other reasons a bank card may not work? Is it possible that John thought his card did not work for one of these reasons?
- What could Bank of America do to let John know why his card did not work?
- What could John have done differently? Should John have known that he did not have enough money in his account to cover the snacks?
- How often do you think people have their cards declined and then they try to run the card a second time? If Bank of America charges all those customers double, how much money are they making? Is this a fair practice?
- Overcharging your bank account, is a pretty common mistake for young people. Do you think this practice unfairly impacts young people? Why or why not?
- This is a situation that happens when people are struggling with money. Sometimes bills are taken out of a bank account and the person who owns the bank account does not know that charge came out. Or a person may have been expecting a deposit and the deposit was late. Do you think this practice unfairly impacts people who do not have a lot of money? Why or why not?

**Instructor's Note:** Have the class take a vote. Who should win this lawsuit?
Bank of America lost this lawsuit. The bank had to pay $100 million in restitution to harmed customers. Restitution means the bank had to make it right. The bank had to pay another $150 million in fines.

**Instructor's Note:**
Thinkers should add the fee total for the dishes.

**Probing Questions:**

- Do you think the fees are high? Why or why not?
- Does the price of the fees impact your thinking on this lawsuit? Why or why not? If the fees were more expensive, do you think you would have a different opinion? Why or why not?
- Do you care more about the amount or the principle that the price listed is not the actual price? Why?
- If you bought every item on this list and there were no fees, your total would be $153.94. Do you think a $5.77 fee on a $153.94 bill is unreasonable? Why or why not?

**Junk Fee 2: Restaurant Fees** (Traveler's United v. Clyde's Restaurant Group, Washington D.C., 2023)

Imagine you are at a restaurant called Clyde's in Washington D.C. You look at the menu and see the prices listed for each dish. But when you get your bill, you are surprised by the total amount. That is because Clyde's adds a special fee to each item on your bill. This fee is called the "2023 surcharge," and it is an extra 3.75% that you must pay.

The restaurant does mention the fee at the bottom of the menu, but many people do not read the entire menu carefully. Some people quickly look at the menu online to decide if they can afford to eat at the restaurant, but the price they see is not the actual price they will pay.

A group called Traveler's United sued Clyde's. The group says that restaurants should list the full price of each dish, including any fees, so that people know what they are going to pay before they order.

| | | |
|---|---|---|
| **Clam Chowder**<br>Menu Price: $8.99<br>Fee: $0.34<br>$8.99<br>+ $0.34<br>$9.33 | **Cheeseburger**<br>Menu Price: $16.99<br>Fee: $0.64<br>$16.99<br>+ $0.64<br>$17.63 | **Shrimp and Grits**<br>Menu Price: $22.99<br>Fee: $0.86<br>$22.99<br>+ $0.86<br>$23.85 |
| **Jumbo Lump Crab Cakes**<br>Menu Price: $25.99<br>Fee: $0.97<br>$25.99<br>+ $0.97<br>$26.96 | **Braised Short Ribs**<br>Menu Price: $36.99<br>Fee: $1.39<br>$36.99<br>+ $1.39<br>$38.38 | **Filet Mignon**<br>Menu Price: $41.99<br>Fee: $1.57<br>$41.99<br>+ $1.57<br>$43.56 |

How much would you pay in fees if you ordered all these items?

$0.34 + $0.64 + $0.86 + $0.97 + $1.39 + $1.57
= $5.77

- What would the world look like if every restaurant added additional fees to the totals listed on the menu? How would that impact customers? How would that impact servers?
- Should there be a rule about how restaurants list their prices? Why or why not?
- Would you eat a restaurant that did not have ANY prices listed? Why or why not? Is this situation with the feels similar to that situation or different? Why?
- Is it reasonable for the restaurant to assume that all customers understand percents? Why or why not?

**Instructor's Note:**
Have the class take a vote. Who should win this lawsuit? At the time this lesson was published, the case had not been decided.

**Instructor's Note:**
These prices are all taken directly from the menu on Clyde's restaurant website. The fees are not directly listed. Customers must calculate the 3.75% fee to determine the final price of each dish.

| Who should win?<br>☐ Traveler's United<br>☐ Clyde's | Why?<br>Thinkers may choose either option. |
|---|---|

**Junk Fee 3: Traveler's Fees** (Traveler's United v Sonesta International Hotels, Washington D.C., 2023)


Sonesta Hotels owns hotels throughout the United States. Customers can go to their website to look for hotel rooms. The listing shows a description of the room and the price to stay in the room for one night. However, when customers reach the final check out page, many fees have been added.

This type of pricing is called **drip pricing.** Drip pricing means that the company does not show you the full price upfront. Instead, they wait until you have invested time and effort into selecting the room and then add on fees at the end.

Traveler's United, a group that helps people who travel, thinks that drip pricing is unfair. They say that hotels and other companies should always show the full price of a product or service upfront, so that people know exactly how much they are going to pay before they book or buy anything. Traveler's United sued Sonesta Hotels. They claim the hotel's drip pricing is unfair to travelers.

| | |
|---|---|
| The Royal Sonesta Boston lists a hotel room with a king bed and view of the city for $309 a night.<br><br>Three additional fees are added:<br>• Hotel Tax $44.65<br>• Assessment Tax $4.64<br>• Destination Fee $22.03 | How much will you pay for one night?<br>$44.65<br>$4.64<br>+ $22.03<br>$71.32<br><br>$309.00<br>+ $71.32<br>$380.32 |
| The Alexis Royal Sonesta Hotel Seattle lists a deluxe room with a king bed for $189 a night.<br><br>Three additional fees are added:<br>• Occupancy Tax $29.67<br>• Fee $4.00<br>• Destination Fee $21.98 | How much will you pay for one night?<br>$29.67<br>$4.00<br>+ $21.98<br>$55.65<br><br>$189.00<br>+ $55.65<br>$244.65 |

**Instructor's Note:**

**First,** thinkers should add the fee total for the room.

- Do you think this total is reasonable? Why or why not?
- The room in Seatle just lists "fee" without any explanation. Is that okay? What questions should you ask about that fee?
- The "fee" is $4. Would you let it go or ask the hotel about the charge? Why?

**Second,** add the fee to the room total.

- How would you feel when you saw the final total? Why?

**Instructor's Note:**

These prices are all taken directly from Sonesta's booking site.

**SEL Instructor's Note:**

All hotels and short-term rentals, like Airbnb, use drip pricing. The price listed when you search for a room or a house to rent is never the final total. It is legal for hotels and rental hosts to use this practice. But is it right?

At thinkLaw, we talk about how doing right is more important than being right. Rules are made by people, and if we see rules or practices that are unfair, we can change the rules.

- Do you think it is right for hotels and rental hosts to use drip pricing? Why or why not?
- There is not one correct answer to this question. Why can it be difficult to answer questions that do not have one correct answer?
- When you experience questions that do not have one right answer, whom do you ask for advice? How does that person help you?

**Instructor's Note:**
Have the class take a vote. Who should win this lawsuit?

At the time this lesson was published, the case had not been decided.

| The Benjamin Royal Sonesta Hotel New York lists a deluxe room with a king bed for $1,099 a night.<br><br>Three additional fees are added:<br>• State Occupancy Tax $97.54<br>• Development Tax $1.50<br>• NYC Occupancy Tax $64.57<br>• Hotels Facilities Fee $48.20<br>• Room Tax $4.00 | How much will you pay for one night?<br>$97.54<br>$1.50<br>$64.57<br>$48.20<br>+ $4.00<br>$215.81<br><br>$1,099.00<br>+ $215.81<br>$1,314.81 |
|---|---|
| Who should win?<br>☐ Traveler's United<br>☐ Sonesta | Why?<br>Thinkers may choose either option. |

**thinkBigger**

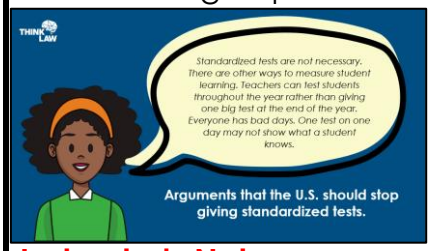
The **Federal Trade Commission**, or FTC, is a government agency that works to protect consumers from unfair business practices, like when companies try to hide extra charges until the very end. The FTC wants to make a new rule that says companies must show you the total price of something right from the start, no surprises!

Not everyone agrees with this rule. When a lawyer works to create a solid case, he or she must consider every side of the issue. It is important to be aware of the arguments both sides will present so that the lawyer is prepared. **EVEN IF YOU DON'T AGREE** with what the other side is arguing, it is important to understand how they view the issue.

**Arguments that the FTC should pass the junk fees rule.**

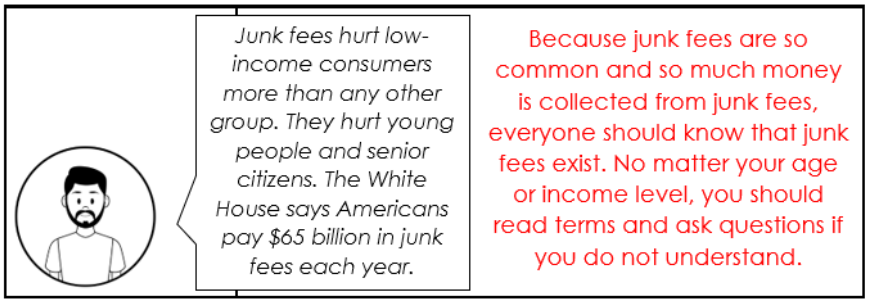
| Argument | Counterargument |
|---|---|
|  *Junk fees are unfair to consumers. They can be hard to understand. Information about junk fees is often hidden in fine print at the bottom of contracts.* | Junk fees may not show up right away, but they are not completely hidden. Customers should always read an entire contract before they agree to enter the contract. |

**Instructor's Note:**
thinkLaw lessons are designed to be flexible. You can have your students go through each of the arguments and write counterarguments or split the class up and assign different arguments to different groups.

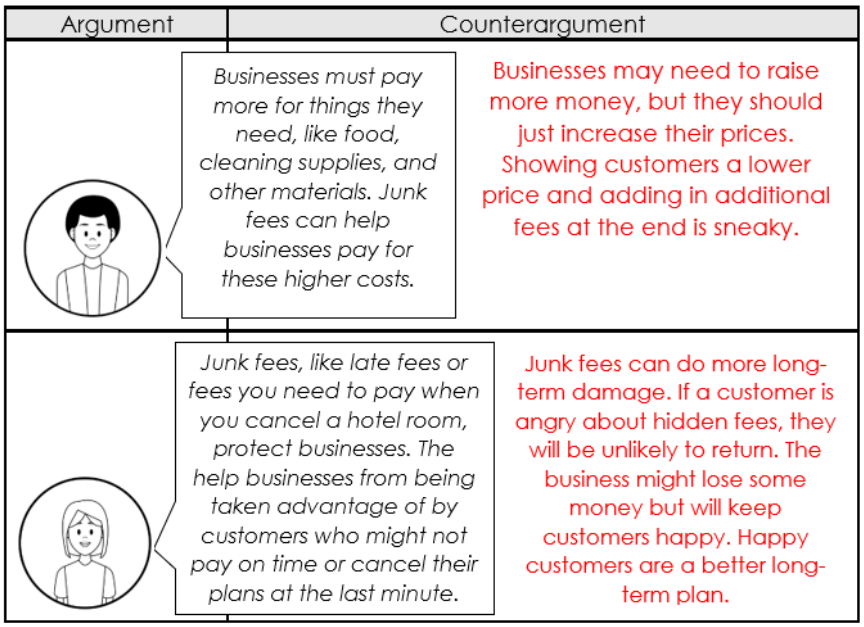



**Instructor's Note:**
You can pause and do a quick **root cause analysis** with the big question, "Why don't people read contracts?" A root cause analysis is the process of getting to the root cause of an issue. A root cause analysis is conducted in multiple rounds. Thinkers begin by considering a big question and conduct the root cause analysis by asking "Why?" through multiple rounds.

- Round One- Give thinkers one minute to write as many possible answers as they can to the question, "Why don't people read contracts?" A sample response may be that people are in a hurry.
- Round Two- Thinkers turn their responses into "Why?" questions. For example, the sample response may be, "Why do people think they're in too big of a hurry to read the terms of a contract?"
- Round Three- Thinkers should answer their "Why?" questions. For our example, a thinker may say, "People want to buy things online because online purchases are fast. They may not have planned to take time to read the terms and conditions of the purchase."




**Arguments that the FTC should NOT pass the junk fees rule.**




Should the FTC pass the rule? Why or why not?

- ☐ Yes. They should pass the rule.
- ☐ No. They should NOT pass the rule.

Thinkers may choose either option.

**Probing Questions:**

- Why is it important to think about counter arguments?
- How does thinking about both sides of an issue help you to make a better argument?
- Can you consider both sides of an argument even if you do not agree with the argument? Why or why not? Why is it sometimes hard to listen to an argument when you disagree?
- Have you ever experienced junk fees? What happened? How did you feel?
- No one makes you sign a cell phone contract or book a hotel room. Should the government be involved? Should businesses be allowed to decide how they want to charge customers? Why or why not? What is the best argument that the government should get involved? What is the best argument that the government should not get involved?

**Instructor's Note:** Have the class take a vote. Should FTC pass the rule?

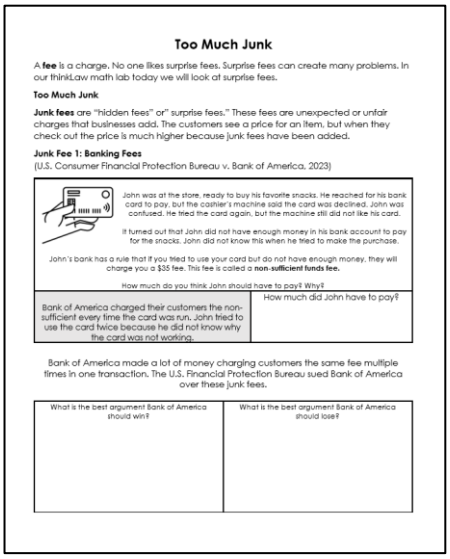
- What is the best argument that the FTC should NOT pass the rule?
- What is the best argument that the FTC should pass the rule?

**Instructor's Note:** Talking about gut reactions is a good way to develop critical thinking dispositions. Everyone has a gut reaction. Gut reactions are a combination of everything we know and have learned in and out of school. Gut reactions are a great starting point for every student in the classroom. We move from gut reactions to informed opinions by pausing and thinking about what we do not know and what we need to know.

- What is your gut reaction to hearing that Americans pay over $65 billion in junk fees every year?
- What questions do you have after hearing that number? Why are the answers to these questions important?

**After the Lesson:**
thinkLaw math labs include exit tickets for additional practice.

**Instructor's Note:**
thinkLaw math labs also include take-home student sheets that are available in English and Spanish. Encourage thinkers to try a mini version of the lesson at home with their families! Asking thinkers to reteach the lesson to their parents helps thinkers to practice synthesis and gives them additional practice with the material.



**Too Much Junk**

A **fee** is a charge. No one likes surprise fees. Surprise fees can create many problems. In our thinkLaw math lab today we will look at surprise fees.

**Too Much Junk**

**Junk fees** are "hidden fees" or" surprise fees." These fees are unexpected or unfair charges that businesses add. The customers see a price for an item, but when they check out the price is much higher because junk fees have been added.

**Junk Fee 1: Banking Fees**
(U.S. Consumer Financial Protection Bureau v. Bank of America, 2023)

John was at the store, ready to buy his favorite snacks. He reached for his bank card to pay, but the cashier's machine said the card was declined. John was confused. He tried the card again, but the machine still did not like his card.

It turned out that John did not have enough money in his bank account to pay for the snacks. John did not know this when he tried to make the purchase.

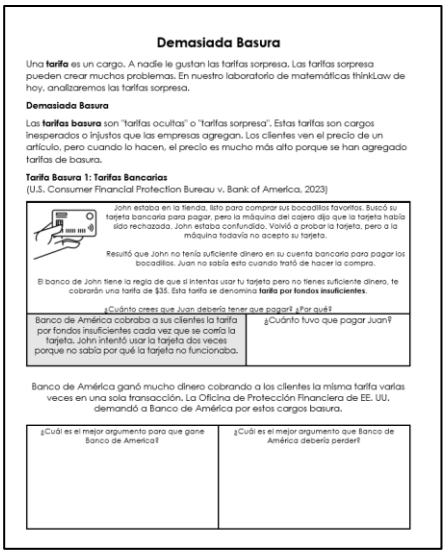
John's bank has a rule that if you tried to use your card but do not have enough money, they will charge you a $35 fee. This fee is called a **non-sufficient funds fee.**

How much do you think John should have to pay? Why?

| Bank of America charged their customers the non-sufficient every time the card was run. John tried to use the card twice because he did not know why the card was not working. | How much did John have to pay? |
|---|---|

Bank of America made a lot of money charging customers the same fee multiple times in one transaction. The U.S. Financial Protection Bureau sued Bank of America over these junk fees.

| What is the best argument Bank of America should win? | What is the best argument Bank of America should lose? |
|---|---|
| | |



**Demasiada Basura**

Una **tarifa** es un cargo. A nadie le gustan las tarifas sorpresa. Las tarifas sorpresa pueden crear muchos problemas. En nuestro laboratorio de matemáticas thinkLaw de hoy, analizaremos las tarifas sorpresa.

**Demasiada Basura**

Las **tarifas basura** son "tarifas ocultas" o "tarifas sorpresa". Estas tarifas son cargos inesperados o injustos que las empresas agregan. Los clientes ven el precio de un artículo, pero cuando lo hacen, el precio es mucho más alto porque se han agregado tarifas de basura.

**Tarifa Basura 1: Tarifas Bancarias**
(U.S. Consumer Financial Protection Bureau v. Bank of America, 2023)

John estaba en la tienda, listo para comprar sus bocadillos favoritos. Buscó su tarjeta bancaria para pagar, pero la máquina del cajero dijo que la tarjeta había sido rechazada. John estaba confundido. Volvió a probar la tarjeta, pero a la máquina todavía no acepto su tarjeta.

Resultó que John no tenía suficiente dinero en su cuenta bancaria para pagar los bocadillos. Juan no sabía esto cuando trató de hacer la compra.

El banco de John tiene la regla de que si intentas usar tu tarjeta pero no tienes suficiente dinero, te cobrarán una tarifa de $35. Esta tarifa se denomina **tarifa por fondos insuficientes**.

¿Cuánto crees que Juan debería tener que pagar? ¿Por qué?

| Banco de América cobraba a sus clientes la tarifa por fondos insuficientes cada vez que se corría la tarjeta. John intentó usar la tarjeta dos veces porque no sabía por qué la tarjeta no funcionaba. | ¿Cuánto tuvo que pagar Juan? |
|---|---|

Banco de América ganó mucho dinero cobrando a los clientes la misma tarifa varias veces en una sola transacción. La Oficina de Protección Financiera de EE. UU. demandó a Banco de América por estos cargos basura.

| ¿Cuál es el mejor argumento para que gane Banco de América? | ¿Cuál es el mejor argumento que Banco de América debería perder? |
|---|---|
| | |

Name _____

**Too Much Junk (Decimals)**

*A thinkLaw Math Lab Cool-Down*

1. An expression is shown. What is the value of the expression?

$12.24 + 3.09 \times 0.6 =$ **14.09**

$3.09 \times 0.6 = 1.854$

$12.24 - 1.845 = 14.094$

2. Jonah rides his bike 10.3 miles on Monday and 7.6 miles on Tuesday. How many miles did Jonah ride altogether?

$10.3 + 7.6 = 17.9$

Answer: 17.9 miles

3. Rachel buys 4 coloring books for $2.00 each. She also buys a set of markers for $3.75. How much more money did Rachel spend on coloring books than markers?

$\$2.00 \times 4 = \$8.00$

$\$8.00 - \$3.75 = \$4.25$

Answer: $4.25

4. In a walking event, Team Wildcat consists of 15 members who walk a 2.1-mile route, while Team Chargers has 8 members who walk a 3.2-mile route. How many more total miles did Team Chargers walk compared to Team Wildcat?

$15 \times 2.1 = 31.5$

$8 \times 3.2 = 25.6$

$31.5 - 25.6 = 5.9$

Answer: 5.9 miles

5. From addition, subtraction and multiplication, which is the top math skill you need for real life? Why?

Student answers will vary. Students may say that it's multiplication because it's essentially a faster version of addition.

6. How did this lesson change your perception on having a strategy to add, subtract, and multiply decimals?

Student answers may vary. Students may say that in this lesson there were many real-life examples of when you'll need to be able to add or multiply on the spot to be able to make an informed decision on a purchase you're making. These are skills we need to know because we will use them often.

**Instructor's Note:**

Within thinkLaw Math Labs, you'll find 5 Cool-down problems strategically integrated to serve as a demonstration of learning or a post-activity assessment.

The goal of a math lab is to help students redefine their math identity – reshaping how they perceive and interact with math.