

Class Day Two

Whole Class

Teacher: All right, the bell's rung so we're on my time now. I wanna start by going back and revisiting what we were talking about in the class yesterday before we got caught by the bell. Yes, Gionni?

Gionni: That was like our group...

Teacher: Yeah, 'cause I think your group did it the same way. Megan, you were explaining it yesterday and we kind of got shut off, so maybe Gionni you want to do it today since, kind of refresh everybody's memory. You have to use a big voice and talk to them.

Gionni: Okay. The way that we came up with all of these, and the way that our group did it is, like, say for instance you want to take cost. Cost, on this list was ranked number one, so we took one plus five, 'cause it was ranked number five on this list, that was six, and then we took four, 'cause it was ranked four on this list and that's ten, and then we took number one on our list and that's eleven, and then cost is ranked number eight which is nineteen on this list, and then cost is ranked number one and that equals twenty, right here.

Teacher: Now wait, make sure everybody understands that.

Gionni: Everybody understand?

Teacher: Questions for him about this, what he, okay.

Gionni: Questions? Okay, the lower the number is the better because the higher the number is it means the lower it was ranked. And that pretty much explains it all.

Teacher: That's a very nice job. Thank you very much. So what he's saying is that they just went over here and I think this group right here, these guys and these ladies in the back and this group all three did it this way. They just looked at the ranked number for each item and added them up, and that's what these totals are right here. And then they put them in order from smallest to largest because, like he said, the smaller the number it is the more often it was near the top and that was a good thing. Okay, it's real important that everybody understand their way because I'm fixing to ask you a question about it, so does anybody have a question for any of these groups? Okay, now, this, Megan, this is kind of for you and kind of for Brian and kind of for everybody, but yesterday when I was over at your group when you first told me what you were going to do you said you were going to find the average. And then when I came back you said, and I heard, actually Brian, you say that you thought you should find the average. But then when I came back you said we don't need to find the average 'cause the total gives it to us anyway. Can you explain what you meant by that? Big voice now.

Megan: Well, we thought, okay, why average it if you could take the number and add them up because no matter what you get all the numbers added up to thirty-six, if you added eight plus eight plus eight plus eight plus eight it'll still come out to thirty-six. So we decided, okay why don't we just do it the easy way and go like that.

Teacher: Okay. So, I think if you added all those eights, I think it's going to be forty-eight not thirty-six okay. But the biggest number you got is 36, so what you're saying is you get the rank. Now, let me ask you this question. Suppose that we decided to find the average, do you think that the order would be the same or it might change a little bit if we then found the average of what the ranks were?

Rob: Might change a little bit.

Teacher: Rob thinks it might change a little bit. What do other people think? Yes, what you think?

Alvin: It would change.

Teacher: You do or you do not, I just didn't hear you, you think it would change, okay. And Gionni, what do you think?

Gionni: I think, I think it would change.

Teacher: You think it would change. Okay, so here's what I would, I would like you to do. If you look on the table in front of you, there should be a stack of white papers and maybe right now if I could ask everybody to put your books on the floor, just set those off to the side on the floor. I'm giving you this information right here, and I would like for you to use your calculators and everyone find the average and then let's find out what the order is based on the average. Okay, everybody clear about what we are going to do here? Okay.

Group 1 Nadira and Brian

Teacher: What did you divide by?

Brian: Eight.

Teacher: Why did you divide by eight?

Brian: 'Cause there's...

Teacher: Eight things.

Brian: Eight yeah. The order stayed the same.

Teacher: Okay, so where did this number come from?

Brian: Um, twenty was, um, the rank number that appeared on the charts.

Teacher: Okay, so what numbers did we actually add to get that twenty?

Brian: To get to twenty, um, they added the rank numbers.

Teacher: Okay, so, I looked up here, how many of those numbers did I add?

Brian: Eight.

Teacher: Eight of them? I think there's only six of them.

Brian: Oops, I guess I need to divide by six.

Teacher: Yeah, what did you divide by?

Nadira: Six. (laughs) Okay.

Group 2 Stephanie, Shevba and Megan

Stephanie: Divided by what?

Megan: Six. Well wait a minute, it's wrong?

Shevba: Eight.

Stephanie: Divide by eight 'cause there's eight.

Megan: No for real it is six.

Stephanie: What is six?

Megan: One, two, three, six sheets. So the first one's 3.3. One plus five plus...

Teacher: How are we doing over here ladies? What did you divide by?

Group: Six.

Teacher: Why did you divide by six?

Group: There's six sheets.

Teacher: Six sheets, okay, all right.

Group 3 Rob, Chris and Alfred

Rob: You take the total and you divide it by six is how many that you got.

Chris: Divide by six?

Rob: Yeah.

Teacher: Why six, Rob?

Rob: Because it, like, gives you the average.

Chris: There's eight things.

Teacher: But there are eight things on the list. Why are you dividing by six, is what Chris is saying.

Rob: Well, um, there are six different ones, and since you added up cost to get twenty you can divide it by six.

Chris: There's eight things on the list though.

Rob: I know.

Chris: Where does the six come from?

Rob: Six different groups.

Alfred: I can see what you're saying Chris.

Teacher: You do?

Alfred: You see, I think it's eight because there's eight things on our list and each, they go in order each time. These are basically going in order, I mean, how they're added up in eight lists and the eight lists of eight.

Teacher: What did you add up to get this number right here? What did you add to get that twenty? How many numbers did you add?

Alfred: Oh, six.

Teacher: Does that make sense, Chris? Sure? Don't just say it 'cause I said it.

Rob: It's 3.3.

Teacher: They almost changed your mind, didn't they?

Rob: Yeah, they almost did.

Group 4 Caleb, Gionni and Sherika

Gionni: (working on averaging, dividing by 8)

Whole Class

Teacher: Okay, how close are you all? You're done. Okay, so Rob do you want to explain? Come up here, big voice.

Rob: All right. The way we averaged these was we took the number, like, cost got twenty-two on the scales.

Teacher: Got twenty.

Rob: Twenty, I'm sorry. We divided by six since we had six groups and that gave us an average of what each group ranked. Like for twenty we got three 'cause, like, cost was like it was five, one, one in another, like four on this one, and one on another, it kept on getting lower then higher, so it brought down the average, way down.

Teacher: Okay, so the piece where he said he divided by six, are we all straight on that part, why it's six?

Class: Yes.

Teacher: Okay, all right. So when you actually got this number, um, what did you all get?

Rob: Three.

Teacher: Did you take it out any further? Did anybody take it out any further?

Student: 3.3.

Teacher: 3.3?

Student: With a bar over it.

Teacher: With a bar over it, thank you. So it's actually 3.3 repeating. So when you actually, when you found this, so you were trying to explain to us what you thought happened by looking at the numbers that you added into the cost and what, why that turned out to be about three. Okay, good. So how about this: could somebody just read me out what you got each time you divided and let's get those numbers up here? How about Alvin, what did you get when you did brand? Big voice.

Alvin: Um, 3.7.

Teacher: 3.7. Okay, all right. What about here, let's come here, Sherika? What did you get when you did style?

Sherika: I have four.

Teacher: Yeah, I probably could've done that one in my head, couldn't I? Okay, all right, and size, uh, let's see. What did you get? Tina, did you have this one? Okay, what about you, Shevba, what did you get for size?

Shevba: 4.1.

Teacher: 4.1. All right, and quality should be the same thing, shouldn't it? All right and comfort, who hasn't done one? Okay, Alfred what did you get?

Alfred: 5.8.

Teacher: 5.8. And let's see, color, uh, Brian?

Brian: 5.83

Teacher: This is a 4.8. Okay, sorry I wrote it down wrong. Okay, and so this one I could do in my head, couldn't I? Okay, all right now I have an asterisk or a star by these two because they were tied, so they should've been tied when we did the average. So, let me check and see if I agree with you all. Yeah, I got 3.6 repeating, which I think somebody just probably rounded. Now, if you look at this, does this mean that style is now number four? Is that what that four tells me? What does it, who said no? What does it tell me?

Megan: It tells you that when it averages out it, um, comes to four 'cause that's all it is.

Teacher: So, how do I use this information to find what the rank order would be, Rob?

Rob: It gives you the average rating that each group gave.

Teacher: Average rating that each group gave. Okay, that's what Rob said. So this says that this one averages being ranked about four, when you look at all of the sheets, okay. Now, how can I use this information to re-rank these in order from the best to the worst? How do I use these numbers? Somebody besides Megan. Who's got an idea? Caleb, what do you think? How do I use these numbers?

Caleb: Um, I'm a little lost here.

Teacher: Okay, so we got these averages now, and I now I want to go back and put these in order from the best to the worst. So, how do I use these numbers to decide which one would be the best?

Caleb: You'd go from the lowest one to the...

Teacher: Yes.

Caleb: And from the least greatest.

Teacher: Least to greatest, all right. So let's, wow, I don't have to do any work, do I?

Caleb: No, because it's already done.

Teacher: So, you're telling me what happened here is that when I did totals and when I did average I got the same thing, I got the same order. Rob?

Rob: Yes, and...

Teacher: Big voice, Rob.

Rob: Yes, that's pretty much the same thing but for size and quality...

Teacher: Yeah?

Rob: You could take a vote of the class to see which one was better.

Teacher: Okay, yeah, we have to come up with some way to break this tie.

Megan: I know.

Teacher: Megan?

Megan: Like when he did it, most of them when they put them on the sheets over there, I think one of them came out seven more often than like two's and three's.

Teacher: Okay, ah, so that's how we can break the tie. Well let me ask you a question, think about this really hard. If I, do you think that I got the same order here, that if I did this again, and I did the total and then I did the average, it would give me the same order or that this is kind of a strange thing that happened on this one problem? Or do you think usually that would happen? Usually that would happen, Megan thinks usually it would happen. Alvin's nodding his head usually that would happen. How could we explain that, how could you explain that if you take the total and you then look at the average, you're probably going to get them in the same order, that the order's not going to change? How could we explain that to somebody else that wasn't in this class, who hadn't been doing this with us? Nadira, do you have an idea of how we might think about, how we can, how can you explain that if you put these in order and then you find the average, they stay in the same order? Do you have a thought about that?

Nadira: 'Cause basically that it an average.

Teacher: Big voice.

Nadira: 'Cause that is the average; the first one is just a different way of coming up with it, because you took all of them, you put it together and then you got the answer, the first, so it's basically the same thing except you did it a different way.

Teacher: I just did it, so what you're saying, what I did here was I just took these numbers and I divided them all by six and so it should be the same thing?

Nadira: Right.

Teacher: So, you're thinking it should happen most times or every time?

Nadira: Right.

Teacher: Anybody else? Does anybody else have an idea about this, Gionni?

Gionni: I'm thinking about it.

Teacher: Okay, so what we're, what has happened here is that when we did the total we got an order and then when we did the average we got the same exact order; it didn't change the order for this and we're thinking that this might happen every time because, like Nadira said, we're doing the same thing to these totals. So it's just like one more step in the process so it's the same thing so it should give us the same result. Okay? Rob, you're nodding, does that seem reasonable?

Rob: Yes.

Teacher: Okay. All right. Good. Anybody have a question about that? Okay, now, I want to change gears just a minute and ask you, how many of you take the Tennessean? Do you get the paper at your house, most of you? Do you ever read it?

Students: Yeah.

Teacher: You do?

Caleb: I do sometimes.

Teacher: Do you have to for class, or do you

Caleb: Yeah, something like that. For social studies class we have to sometimes.

Teacher: What are you looking for when you have to read it?

Caleb: We're looking for like, um, the, um, like it all depends like if we're having a project or if we're just looking for anything particular.

Teacher: Anything. Okay, so Gionni what about you?

Gionni: Recently, to recap what he said, like, we've been looking for stuff about the President Clinton impeachment trial.

Teacher: Right. Okay. That's pretty historic, you know.

Gionni: Second president to ever be impeached.

Teacher: It is, absolutely.

Gionni: after Andrew Jackson.

Teacher: That's very good. Okay, but I think it's Johnson.

Gionni: Johnson.

Teacher: Okay, okay. All right now, I was, I've actually been looking at the paper and one of the things that I have been noticing is there has been a whole lot of information about the police force and the crime in Nashville. Do you ever, you ever noticed that lately? Have you seen anything about that? Are you aware of the controversy that's going on? Rob, you are? Nadira, you are? What do you know about this?

Nadira: That they only have money for so many police officers and they're basically at their limit, but the crime is still not good, so they're trying to figure out other ways to let the crime rate go down then add more police officers to the force.

Teacher: Yeah, that's exactly, could you, could you people hear what she's saying? Could you all hear? So basically what she says is Nashville has a budget that they can spend on police officers and we're spending as much as we can on police officers but we still got a lot of crime. And, in fact, in this one they're talking about having police officers be in neighborhoods as opposed to having to travel greater distances so they have familiarity with the area. This one they actually did a survey and it talks about the possibility of being involved in a crime if you live in Nashville. Then they had a big editorial here, this article. This one has said we need more police, 'cause the mayor's saying everything's fine, that we don't. And then this one we actually had a Grand Jury investigation, and it says that, that crime statistics in Nashville are not very good and we need to do something about it. So, and then the very next day in the paper there's an editorial that says Nashville is turning the tide on crime. So, one day they're saying it's bad, the next day they're saying it's okay. So, it's real interesting the way they come up with these is that they look at statistics about crime in Nashville. Now what kind of things, if you were going to try to decide if Nashville were safe, what kind of things would you personally be interested in finding out about? What kind of crimes would you want to know about? Yes, sir?

Student: Like homicides and murders and stuff like that.

Teacher: Absolutely, murders and homicides would be a big one. Yes sir, Jeff?

Jeff: Break-ins.

Teacher: Break-ins, burglaries would be one, good. What, Rob?

Rob: He said mine.

Teacher: He said yours, okay, anything else? Yes, Megan?

Megan: The shootings that happen everyday.

Teacher: The shootings that happen, Gionni?

Gionni: I think all the days we have to look at the gang activities, because you know gang activities can sometimes be related to all these.

Teacher: Yes it can be. Gang activities is another one. But you know that they, actually there is an organization that actually looks at the crime statistics for the different cities so that cities have an idea of how they're doing with crime compared to other cities. And they look in two different categories, and I've got these written on the board over here, if you could take a look. The first one, the first category is called violent crimes, and there are three different crimes, three different types of crimes they look at in that category. The first one is murder, the second one is robbery, and the third one is assault. Now I want to make sure that you understand what those terms mean, I think we all know what we mean when we say someone has been murdered. What, what do you think a robbery is? How would they define what a robbery is? Yes, ma'am?

Megan: A robbery is like taking something that isn't yours, so if you take something that does not belong to you then that's considered stealing or robbing somebody, whether it's at gunpoint or threat or a weapon.

Teacher: That's excellent. She just made a very important distinction. If you look under property crimes it says burglary, and the difference between burglary and robbery is that robbery, there's a threat. You either do it at gunpoint or you threaten someone's life. So it's a violent crime because someone is personally threatened in that process. I'm trying to take something from you, while you have it on you, and I threaten you. And then assault. What is assault? Does anybody know what assault is? Yes?

Student: When you like beat up on somebody.

Teacher: Yes, you beat up on somebody. So, then under the violent crimes, someone's getting hurt or threatened in each one of those. Now, under the property crimes we've got burglary, which we just talked about the difference there, theft, what would be theft? What's the difference in burglary and theft? Anybody know? Rob?

Rob: Burglary is major like taking stuff like wallets and stuff. Theft is like taking bubble gum from the store or something.

Teacher: Yes. So, burglary you have to break in to do and so theft, yes ma'am, Tina?

Tina: Kind of like shoplifting.

Teacher: Yeah exactly. So shoplifting would be theft. Is that what you were gonna say?

Student: I was gonna say burglary like you said, braking into houses and stealing big things and theft is more like pocket picking and things like that.

Teacher: Yeah, okay, but I'm not sure about pocket picking. I think they would call that robbery because if the person is there.

Student: Yeah robbery.

Teacher: Yeah, so like if you were gonna like steal something out of a store, I think. And then auto theft is obviously is auto theft right? Okay. Now let me show you what I've got here. Give me one second to put some tape on this and then I'm gonna put it up.



Rob: Need help?

Teacher: Yeah, why don't you just come help me hold it and we'll talk about it. Now, can you stand there and look, What I'd like you to do is take one minute to read through this sheet and then I want to talk about it. Okay, so what we have, what this tells us is that we have kind of a disagreement between the mayor and the city council. Do you understand that Nashville is governed by a mayor and a city council? And there's some disagreement. The mayor is saying Nashville is safe, we don't need more money in the budget for police and the city council is not sure. But the mayor has said, "Look, if you take Nashville and you compare it with all of these cities, and you come up with a way to rank these, Nashville is gonna rank as being really safe. Now, the information that they have, these are, under this category, this is the murder rate. This tells you that in Atlanta for instance, for every 100,000 people 12.4 of them were murdered. Do you remember when we talked a little bit about rates last week? We talked about that as a way to be able to make comparisons when things weren't equal. That's what all of these numbers are. So, this tells us that in Atlanta, there are 370.4 robberies for every 100,000 people in the city. So you have all of this data, you have the violent crimes data and the property crimes data of all of these cities. And what I'd like for you to do, I'm gonna give each of the groups one of these, I'd like for you to come up with a way to see how Nashville ranks when you compare it with these other cities. Now does anybody have a question about the task or about the information, the data on the chart? Everybody clear about what this means? So could someone tell me what this number right here tells me? Can you read it well enough? Rob, maybe you can 'cause you're here. So what is this number, it says 2, 538? Is that how many murders there were all together?

Rob: Yes.

Teacher: In Miami? Now this is a rate so it's gonna tell me, what now? Yes?

Student: Per 100,000 people.

Teacher: Yes, exactly, per 100,000 people. Now if you look at how the data is on the chart first it gives you murder, robbery, and assault and then it totals them, so this tells you how many total violent crimes, by adding these columns. And then this total tells you how many across there. And each of you will get one of these. Okay, so why don't I pass these out and give you a minute to look at them to see if you have any questions.

Group 1 Nadira and Brian

Brian: Look, it's higher in that, that . . .

Teacher: (addressing whole class) Could I have everybody's eyes for just a minute? Once you come up with a system that you're gonna use to rank these, what I'd like you to do is somehow show that on the chart, on the paper so I could understand the system. Okay? So some how you can, you're welcome to mark on this and if you would like markers you could have markers.

Brian: These are a little higher than Nashville. I put checks on them.

Nadira: So, we're looking at Nashville so... (she circles data)

Brian: Okay, now let's go over here and mark these.

Tina: What's the question?

Brian: The question, um, is Nashville safer than the other towns?

Nadira: And you have to figure out why.

Brian: We're trying to figure out the ones below Nashville.

Nadira: Yeah, but I'm checking the ones that are above Nashville.

Brian: Why?

Nadira: So we won't even have to look at them. So we're number two of this one.

Brian: And on this one, one, two, three, four, five, six,

Nadira: No, but this one's lower than that one.

Brian: Yeah, I know.

Nadira: So, that wouldn't count, it would be five.

Brian: No, what I was saying, one, two, three, four.

Nadira: Oh, you're checking which are lower.

Teacher: Okay, what's your plan here guys?

Brian: Um, we checked the ones that were lower than Nashville is, so it's ranked six.

Teacher: Uh-huh.

Brian: And this one and then this one we checked which was higher, ranked second for property crimes.

Nadira: But that one's higher than...

Brian: No, 678 is lower.

Teacher: So what are you gonna do with that information?

Nadira: I'm sorry, I was looking at that other six.

Teacher: So, maybe if you like put all the numbers by them in here that would be easier. You would be able to understand what you did, which would be number one, two, three.

Brian: Yeah.

Teacher: Then what are you going to do with that information when you get it? Like you'll have how they ranked here and how they ranked here, and then I need you to come up with one ranked list. How could you...

Nadira: Of all of them?

Teacher: Uh-huh, of all of them. Could you use that information to come up with one list for me?

Brian: Uh, yeah.

Teacher: What would you do?

Nadira: Add those two together and...

Brian: We'd go from like least to greatest and give them all ranks.

Teacher: Okay, great. And once you got all the ranks here and all the ranks here...

Nadira: Add them up.

Teacher: You're going to add them together?

Brian: Yeah.

Teacher: Okay, all right. Sounds like a plan.

Group 2 Stephanie, Shevba and Megan

Megan: Well, just put one, two, three, four, five, six, seven, eight, nine and then this plus that, rank the whole thing in one row. We don't have to worry about...

Stephanie: What is she talking about? She don't know a thing. It ain't what we trying to do.

Megan: Let's let Shevba handle this one.

Shevba: This first one...

Stephanie: Everybody supposed to put their names.

Megan: So, how are we gonna do this? Stephanie, you're in charge.

Stephanie: I guess put them from least to greatest right? Or greatest to least.

Megan: Least to greatest. If we do it from least to greatest than this one would be first, then this would be second, third, fourth, fifth

Stephanie: We could write on this, put the numbers down.

Megan: Hi, we're having a little trouble here.

Teacher: Tell me about it.

Megan: Are we suppose to write on this sheet or can we write on this?

Teacher: You can write on this, sure, you can write on this.

Megan: Okay, are we supposed to do both of these together?

Teacher: Yeah, I want to know, all of that information, you come up with one ranked list of all of those cities.

Megan: Okay, then that shouldn't be that hard.

Teacher: Okay, how might you do that?

Megan: Well, add the total violent plus the total property together.

Shevba: And then rank from least to greatest

Teacher: Are you asking me or telling?

Shevba: Telling.

Teacher: Okay, good. Tell me, yeah tell me, that's right. Sounds like a plan to me.

Group 3 Rob, Chris and Alfred

Rob: We could take this number and this number, average them together and then rank them. What do you think about that?

Teacher: What do you think about that guys? Are you okay with that? Are you okay with that, Chris? Okay, he's not sure so make sure. Think about that.

Rob: Okay, that that plus that 359.8

Teacher: If you decide to do this, then you might want to like show the computation. But you may want to do it on a sheet of paper and check them first.

Rob: I already did.

Teacher: Did you convince him this was an okay thing to do or are you just... Don't let me sway you now. You need a couple or just one?

Group 4 Sherika, Gionni and Caleb

Gionni: Okay, Caleb let me explain to you what we got to do.

Caleb: No, I already know what to do.

Teacher: Okay, so tell me. I want to understand. I see all these numbers here and I want to understand.

Gionni: Okay, here's what we did.

Sherika: Okay, shhh. Okay

Gionni: You don't go and explain, I explain.

Sherika: Okay, we did the Nashville, okay Nashville is thirteen, I mean 1, 350, so we trying to figure out which one Tennessee is ranked and it's ranked five, because . . .

Teacher: Ah, okay.

Sherika: You see this is the first one 'cause it's the lowest number and then . . .

Teacher: So, you're finding the rank in each of these columns so you're gonna do it for how many columns?

Sherika: All of them.

Gionni: We're going by the lowest number to the highest number. Like on this one Burlington, Vermont ranked number, ranked number one, it was the lowest.

Teacher: Now let me ask you this. Once you get all of these ranks done, then what are you gonna do with that information?

Gionni: Well, what we gotta do, we gotta find out, we gotta take each time that Nashville was ranked, like on this one Nashville was ranked number six and each ranking that it is we're gonna take it and we're gonna divide it by all of the columns

Teacher: Add them up and divide.

Gionni: And then we say we're gonna average them.

Teacher: Okay

Caleb: And then we were...

Gionni: This is kind of fun.

Teacher: This is kind of fun?

Whole Class

Teacher: Okay, I dismiss, not the bell. Let me have your eyes please. If you would just leave, first of all put at least one person's name from the group on the chart, so I know whose group it belongs to. Leave your materials on the table and I'll collect them, and I'll see you in the morning.