Problem Solving with Multiplication and Division (Grade 3)

TEACHER 1: Today, boys and girls, we are going to be working on a transfer task. We have just finished up our study of multiplication and division, and today we're going to begin applying what we had learned about multiplication and division in some real-world scenarios or situations.

We know that we use math in everyday life. What are some times in your daily schedule, your daily life, that you might need to use math? Can you turn to your table mates right now? I'd like each table-- three times a day when you're using math.

STUDENT: School, dinner, and then math homework.

TEACHER 1: Well, boys and girls, today we're going to be applying and using the math that we've been learning about multiplication and division to a real-world scenario. You're going to be helping me today plan for a class picnic. So let's go ahead and direct our attention to the front of the board, Our Third Grade Picnic.

Let me give you the details, and then we'll begin applying what we have been learning. Third grade teachers would like to plan for a picnic for the 42 third grade students. In planning for the picnic, the teachers need your help developing our shopping list. Each of your cooperative groups have received a red folder. Can you open your red folder?

Inside is a small card. I need your help in making our shopping list for our class picnic. Take out that small card and share it with your group now.

Gloria, Vivian, Jamie, if you guys can push your chairs in please. Thank you. Peterson Panthers, your attention please, in 5, 4, 3, 2, 1, 0. Take a look at your cards, boys and girls. These are the items that we're going to need on our shopping list.

Beneath the item, you will see that the quantity is listed or the number of items of that particular supply in each package. For example, Andy's group over here is going to be responsible for helping us purchase the paper plates. Paper plates are sold in packages of nine.

Now, in planning for the picnic, boys and girls, we need to keep some things in mind. We need to be sure that we have enough supplies and materials for all 42 students who will be in attendance. You need to help me today develop our shopping list to ensure that we have enough of your particular item or supply for each of our 42 third grade students who are going to be at the picnic.

Here is your task. Inside of your red folder, please take out your math task part one sheet. There is one for each partner in your group. At the top of the page, it explains the task. That's exactly what Mrs. Kenske just explained to you. We're going to be planning today for a class picnic for 42 third grade students.

Part one of our task today is to help Mrs. Kenske make our shopping list to ensure that we have enough supplies and materials for all 42 students who are going to be attending the picnic. Go ahead, boys and girls, and let's take a look at our transfer task page today.

You'll see that that acronym MATH, M-A-T-H, is spelled out on the front and the back of your piece of paper. What does M stand for? Najan?

STUDENT: Make a picture.

TEACHER 1: Make a picture. Today, as you and your group members are working, you may need to make a picture to represent how many packages of your particular item will need to be purchased in order to ensure we have enough for all 42 students in attendance. A? What is the A in the acronym MATH stand for? Jeremy?

STUDENT: Algorithm.

TEACHER 1: An algorithm. What is an algorithm?

STUDENT: A number sentence.

TEACHER 1: A number sentence. Very good. In the acronym MATH, A stands for algorithm. You and your group members are going to need to work together to write an algorithm to represent how many packages of your particular item or supply will need to be purchased.

T? What does T stand for in the acronym MATH? Cojo?

STUDENT: Tell your answer.

TEACHER 1: Tell your answer. When we do group members today, you need to be sure to tell your answer. When telling our answer, we also need to be sure to always include our unit. What is your unit going to be, Udae?

STUDENT: Whatever you have for your--

TEACHER 1: Very good. Whatever your particular item or supply is. Are all of our units going to be the same?

STUDENT: No.

STUDENT: Yes.

STUDENT: No.

STUDENT: No.

TEACHER 1: They're not going to be the same, because each group has a different item or supply that you're going to be shopping for. H in the acronym MATH, what does H stand for? Ashani?

STUDENT: How did you do it.

TEACHER 1: How did you do it. And in this part of our task, we need to explain step-by-step what we did and why we did it. Boys and girls, does anyone have any questions about your first part of your task today? What level voice should I expect to hear as you and your group members are working? Maxwell?

STUDENT: One.

TEACHER 1: A level one whisper. What should I expect to see as I look around the classroom today? Amelia?

STUDENT: Everybody at your table working together.

TEACHER 1: I love it. Everyone working together at your table, sharing ideas, and listening to one another. Boys and girls, you and your group members, I need you to help me develop our shopping list for your particular item. You'll have the next five minutes to complete this portion of your task for your item that your group is going to be shipping for. A level one whisper-- you may go ahead and begin.

So tell me, Jimmy and Udae, what are you shopping for?

STUDENT: Apples.

STUDENT: Yeah, apples.

TEACHER 1: Apples. And they're sold in packages of?

STUDENT: 3.

TEACHER 1: Packages of 3. Very good. So, Udae, can you go back to your picture for just a minute?

STUDENT: So I think we need to draw 42 students, and each has 3.

TEACHER 1: 42 students and each child has 3 apples. Jimmy, if we go back to the task description, do we want 3 apples per child?

STUDENT: No.

STUDENT: No.

TEACHER 1: No. We want how many apples per child?

STUDENT: 1.

STUDENT: 1.

TEACHER 1: 1 apple per child. So Jimmy, if we drew 42 children, and we gave each child 3 apples, about how many apples would we have?

STUDENT: 129.

TEACHER 1: 129. Would that be more apples than we need, Jimmy?

STUDENT: Yes.

TEACHER 1: So drawing 42 students and giving each one 3 apples is going to give us way too many apples. Udae, what's your idea?

STUDENT: First-- I didn't write it on here though-- but I divided. 42 divided by 3 equaled 14. So I do 14 circles for equaling bags, and then 3 apples in each-- tally marks for representing 3 apples in each back.

TEACHER 1: Jimmy, did you see Udae's picture?

STUDENT: Yeah.

TEACHER 1: He has 14 packages with 3 apples in each. What is 14 times 3, Udae?

STUDENT: 42.

TEACHER 1: 42. Do you have any remaining apples?

STUDENT: No.

TEACHER 1: No. So you have just enough apples.

STUDENT: So I need to draw 16?

TEACHER 1: Udae, how many packages of apples are you suggesting?

STUDENT: 14.

TEACHER 1: 14 packages of apples. With how many apples in each?

STUDENT: 3.

TEACHER 1: 3 apples in each. Hot dogs are sold in packages of 8. So explain to me what is the picture that you've drawn.

STUDENT: Well, we just drew 3 boxes of hot dogs here.

STUDENT: Yeah.

TEACHER 1: So 3 boxes and 8 hot dogs in each. So you're suggesting we buy how many packages of hot dogs?

STUDENT: 5. We need to draw 2 more here.

TEACHER 1: Oh, you need to draw 2 more. Why 5, Ashani?

STUDENT: Because 8 times 4 is 40. Then I plan to add 2 more to make it 42.

TEACHER 1: How are we going to get those 2 more?

STUDENT: Add 2 more in one pack.

TEACHER 1: Have you gone to the store before and have you been able to take two hot dogs out of another package?

STUDENT: No.

STUDENT: No.

TEACHER 1: No. So how are we going to get those 2 extra hot dogs we need? If we only buy 5 packages, that will give us how many hot dogs?

STUDENT: 40.

TEACHER 1: 40. But we have 42 children who are going to be at the picnic. We need to be sure we have a hot dog for everyone.

STUDENT: So we buy one more packet?

TEACHER 1: You buy one more package.

STUDENT: And then we have some leftover.

STUDENT: But then we have 41.

TEACHER 1: You have some leftover. Well, if you buy 1 more package, Cojo, we have 40 hot dogs with 5 packages. You buy 1 more package. How many hot dogs will you have then?

STUDENT: 41.

TEACHER 1: 41? How many hot dogs are in each package?

STUDENT: 8.

TEACHER 1: 8. So if you have 40 hot dogs, and you add 1 more package of 8, how many will you have now?

STUDENT: 42.

TEACHER 1: What's 40 plus 1 more package of 8? What's 40 plus 8?

STUDENT: 48.

TEACHER 1: 48. So then you would have 48 hot dogs. And, Nick, what did you say about those extras?

STUDENT: You can use them for later.

STUDENT: So if anybody else wants more.

TEACHER 1: You have extras for anyone else who maybe comes to the picnic or if you want to have them for leftovers. Very good. Is it OK to have remaining items?

STUDENT: Yes.

TEACHER 1: Would you rather have remaining items are not enough?

STUDENT: Have the remaining items.

STUDENT: Have remaining items.

TEACHER 1: Would you want to be the person at the picnic, Cojo, who didn't have a hot dog?

STUDENT: No way.

TEACHER 1: No, me either. Juice boxes are sold in packages of 7. Can you go back and show me your picture?

STUDENT: I don't want to.

STUDENT: We did 7 boxes, and then we knew we had to get 42 people. Then we did multiplication to see 7 times what equals 42.

TEACHER 1: 7 times what is 42?

STUDENT: And then we kind of looked right here.

TEACHER 1: So you used your multiplication chart as a tool. Very good. So how many packages of juice boxes will we need to purchase?

STUDENT: 6.

TEACHER 1: 6 packages. Very good. How many juice boxes will that give us?

STUDENT: 42.

TEACHER 1: Will we have any leftover or remaining juice boxes?

STUDENT: No.

TEACHER 1: No. Great job. I love your picture. You guys are shopping for hamburgers. Hamburgers are sold in packages of 6. So Najan, can you explain to me how your group got started?

STUDENT: I made 6 packages, and then I put 1 in each. And then I kept doing that until all 42 were--

TEACHER 1: Oh, OK. So you made 6 packages. And how many were in each?

STUDENT: 7.

TEACHER 1: 7, very good. So you didn't make your picture with packages of 6. You did the commutative property or the turn around fact. You really did 6 packages of 7 inside. What is 6 times 7?

STUDENT: 42.

STUDENT: 42.

TEACHER 1: 42. Do you have any remaining hot dogs?

STUDENT: No.

STUDENT: No.

TEACHER 1: No. Is that OK?

STUDENT: Yeah. Yeah.

TEACHER 1: OK, very good. Excellent. What were you shopping for?

STUDENT: Small bags of chips.

TEACHER 1: Small bags of chips. And they're sold in packages of how many?

STUDENT: 5.

STUDENT: 5.

TEACHER 1: Packages of 5. So can you go back and show me how your group got started?

STUDENT: Well, first we did algorithm, because we didn't want to draw a picture, because we had a number sentence first.

TEACHER 1: What was your number sentence?

STUDENT: 5 times 9 equals 45.

TEACHER 1: Well, how did you know to start with 5 times 9?

STUDENT: Because if we did 7 times 5, you only get probably-- because we will have 2 remainders.

TEACHER 1: So how did you know to start with 5 times 9 though?

STUDENT: Because since we had 5, we counted by-- we counted to 9.

STUDENT: Well, we already had 45, so we have 2 extras.

STUDENT: We have 2 remainders.

TEACHER 1: So you have how many remaining with 45?

STUDENT: 42 divided by 5 is 9, with a remainder of 2.

TEACHER 1: How many students do we have at the picnic?

STUDENT: 42.

STUDENT: 42.

STUDENT: We had 2 extras.

TEACHER 1: 42 plus 2 extras would be a total of how many?

STUDENT: 44.

TEACHER 1: 44. You told me we had 45 bags of chips. So is your remainder--

STUDENT: Oh, 1.

TEACHER 1: What's your remainder?

STUDENT: 3.

TEACHER 1: Your remainder is 3. Wouldn't that make sense that 42 students plus 3 extras, 42 plus 3 equals 45. Very good.

I like how you guys started with your algorithm. It made sense that you were looking for a product that was close to 42. Why didn't you choose--

STUDENT: 5 times 7?

TEACHER 1: Oh, well, 5 times 7? Yeah, why not?

STUDENT: I was telling them to do it, but they-- but I-- then he got an idea that we should do 5 times 9.

TEACHER 1: Why didn't you want to do the 5 times 7, Adi?

STUDENT: I actually multiplied in my head and I got 35. And I knew that 5 times 9 is 45, and that's the closest number to 42. That's over.

TEACHER 1: Why not 5 times 8? That's 40. That's close to 42 too.

STUDENT: Because then we won't have enough for everybody.

TEACHER 1: Oh, OK. So you wanted a product that was close to 42, but it was more than 42.

STUDENT: Yes.

TEACHER 1: You wanted to make sure you had enough for everyone.

STUDENT: And this gets-- actually is the case, if the [INAUDIBLE].

TEACHER 1: Absolutely. Very good. All groups have had time now to make your suggestion as to how many packages of your particular item or supply we will need on our shopping list. I need you pencils down now and eyes up front.

Up on the board, I have our class shopping list. You and your group members and going to carefully come to the front of the classroom, and you're going to fill in our shopping list for your particular item. Let's take a look at the headings at the top of our chart.

We have each of our food items and supplies listed on the left-hand side. Across the top, you're going to record how many items in each package. So how many of your hamburgers are in each package? Or if you were shopping for cupcakes, how many items, or cupcakes, came in each of your packages? You'll fill it in in our shopping list.

You're going to tell us how many packages we're going to need to purchase, and then you'll also record the total quantity purchased. Now, that total quantity might be more than 42. Explain that to me.

Why might our quantity be more than 42? Najan?

STUDENT: Because if you multiply it and it's just a little lower, you need to go to the next number.

TEACHER 1: If it's a little lower than what?

STUDENT: If it's a little lower than 42.

TEACHER 1: Najan is telling us that if we had multiplied our packages and our total was less than 42, you needed to add another package. Why is that, Najan?

STUDENT: Because then not everyone will get one.

TEACHER 1: Very good. You needed to make sure that everyone would get one of your supplies or items. How many packages did you guys need?

STUDENT: 5.

TEACHER 1: 5 packages. And how many paper plates would be purchased in all?

STUDENT: 45.

TEACHER 1: 45. Now, do we have more paper plates than what we will need?

STUDENT: Yeah.

STUDENT: Yeah.

TEACHER 1: Yes. Is that OK?

STUDENT: Yes.

STUDENT: Yes.

TEACHER 1: How many remaining paper plates will we expect to have?

STUDENT: 3.

STUDENT: 3.

TEACHER 1: 3. Fantastic. Very good. My group that shopped for hot dogs, come on up. How many apples in each package?

STUDENT: 3.

TEACHER 1: 3. Udae, how many packages will we need to buy?

STUDENT: Oh, 14.

TEACHER 1: 14. And how many apples will we have?

STUDENT: We will have--

STUDENT: 42.

STUDENT: Yeah.

TEACHER 1: Will we have any remaining apples? Will we have any remaining apples?

STUDENT: No.

STUDENT: No.

TEACHER 1: Just enough. Very good. Thank you.

Boys and girls, did you use any algorithms or operations today to help you solve or figure out your portion of the shopping list?

STUDENT: Yes.

STUDENT: Yes.

TEACHER 1: Josh, what did you use?

STUDENT: Multiplication.

TEACHER 1: Multiplication. What was your algorithm?

STUDENT: 7 times 6 equals 42.

TEACHER 1: 7 times 6 equals 42. Raise your hand if your group also used multiplication for your algorithm.

STUDENT: We used both.

TEACHER 1: Very good. Hands down. And did any group use an operation other than multiplication? Adi, what operation did you use?

TEACHER 1: Division. Very good. Can you explain your division algorithm?

STUDENT: We did 42 divided by 5.

TEACHER 1: 42 divided by 5. 42 divided by 5 is what?

STUDENT: 9.

TEACHER 1: Can 5 go into 42 evenly?

STUDENT: No.

TEACHER 1: No. So what did you do?

STUDENT: I did multiplication to turn it back around.

TEACHER 1: To turn it back around. So what did you do with your multiplication then?

STUDENT: I looked for a fact that's over 32 or the same.

TEACHER 1: Or 42. Or the same. So what did you get as far as a product that was over 42?

STUDENT: 5 times 9.

TEACHER 1: 5 times 9. Very good. Did anyone use repeated addition?

How is it that you can use division, boys and girls? What do we know about multiplication and division? How is division allowing you to also get the same quantity needed? Najan?

STUDENT: Division is like the subtraction of multiplication. They're both in the same fact family.

TEACHER 1: Oh, multiplication and division are both in the same fact family. We call them the inverse or opposite operation. For our third grade picnic, We are expecting 42 children who will be in attendance. We've already made our shopping list to ensure that we have enough supplies and materials for all 42 children.

Our next step is to make sure we have a place for all 42 children to sit. Now, at this school, we have five different types of tables that can be arranged for our picnic. We have square tables that can seat four students, one student on each side.

We have hexagonal tables that can sit a total of six students at the table. Pentagonal tables will sit five students. Our circular tables, three students will be able to sit there, and at our rectangular tables, you can sit 12 students.

Today, you need to decide. We need to let our custodian know which style of tables, or which arrangement of tables she needs to setup to help us prepare for our picnic. Let's take a look at our task sheet, number 1.

STUDENT: If able to use only one style of table, which style would you need the least of to seat all 42 students?

TEACHER 1: What does that word "least" mean? What does least mean-- least? Rohan?

STUDENT: The smallest.

TEACHER 1: The smallest. Very good-- or the fewest. I want you and your group members to discuss one style of table-- only one type of table. Which type of table would you need the fewest tables to seat all 42 students?

I would like you to complete M-A-T-- make a picture, algorithm, and tell your answer. Go ahead and work with your partner. You are going to explain in words to the group.

STUDENT: We're trying to solve how many people can sit in the chair, and there's 42 people.

TEACHER 1: There's 42. And for this part of the problem, we want to use the least number of tables.

STUDENT: That means circle.

TEACHER 1: Class, what are you thinking?

STUDENT: 3 rectangular tables.

TEACHER 1: So if we have 3 rectangular tables, how many students would that be?

STUDENT: That would be 36.

TEACHER 1: 36. Is that enough for everyone?

STUDENT: No.

TEACHER 1: No.

STUDENT: Add another one?

STUDENT: Maybe 4.

TEACHER 1: Maybe 4. Try 4 rectangular tables, how many students would that seat? I liked that idea.

STUDENT: 48.

TEACHER 1: And Tyler, you were thinking circular tables? How many people can we sit at a circular table?

STUDENT: 3.

TEACHER 1: Can more or less students sit at a rectangular table?

STUDENT: More people can sit at a rectangular table.

TEACHER 1: More people at a rectangular table. Remember, we want to keep it the fewest, the least number of tables. If we do circular tables--

STUDENT: Oh, yeah. OK.

TEACHER 1: --we would need many more circular tables to sit people.

TEACHER 2: Can you use different ones instead of the three 12? Can you combine some of them?

STUDENT: Yeah, that's what I was thinking, like three 12s and then one hexagon.

TEACHER 2: Can you use one of each, or something like that, or no? I don't know.

STUDENT: I think you could. We have two 12s and--

TEACHER 1: But look at the directions-- only one style of table.

STUDENT: Oh.

STUDENT: Oh.

TEACHER 1: You can only use one type of table. You may have more seats than you need, but it says, "To sit at least 42 students."

TEACHER 2: Can you see--

STUDENT: Oh, I know. 6 times 1, 2, 3, 4, 5. 6 times 7. 6 times 7.

STUDENT: Yeah, 7 hexagonals.

TEACHER 2: Will give you what?

STUDENT: Will give you 42.

TEACHER 2: So [INAUDIBLE] the page.

STUDENT: Ms. [INAUDIBLE], can we do something [INAUDIBLE]?

TEACHER 1: How man circular tables will you need?

[INTERPOSING VOICES]

It looks like you have a lot of circular tables, right? The directions tell us that we want to use the least, or the fewest number of tables. Have you guys used the least number of tables possible?

No. I think you might have used the most number of tables possible, because you chose the style of table that sits the fewest students. How might you be able to find the style of table that sits the most students?

[INTERPOSING VOICES]

Oh, how many students sit at the rectangular table?

STUDENT: 12.

TEACHER 1: 12 students. Might you be able to find out how many rectangular tables you need?

STUDENT: This one would be circles, because, look, it's pretty much just opposites.

STUDENT: But one style table and the least of the seats. See, this is the least of the seats. These are the tables. That'd be the seats.

So we only have 4. For this one, we want the most seats.

STUDENT: Yeah.

STUDENT: So this one would be rectangle and this one would be a circle.

STUDENT: Because you want the least amount of tables.

TEACHER 1: Keven, is there a style of tables that would require using less than 7 tables?

STUDENT: The rectangular.

TEACHER 1: The rectangular tables? How many of those tables would you need to use?

STUDENT: 4.

TEACHER 1: Oh, 4? Is that less than 7? Might that be our solution?

STUDENT: Isn't there more than 7?

TEACHER 1: Well, Ashani said you would need 4 rectangular tables. Now, you need 7 hexagonal tables. Is 4 less than 7? Yes.

STUDENT: I need a new eraser.

TEACHER 1: As I went around the room today, I really liked to hear your thinking, your thought process, and your explanation as to why your group chose that particular style of table. Sydney, what style or shape table that your group decided to use?

STUDENT: We chose 4 rectangular tables.

TEACHER 1: 4 rectangular tables. Boys and girls, raise your hand if you and your group members also chose rectangular tables.

STUDENT: Everyone.

STUDENT: It's because 12 is bigger than 4, 6, 5, and 3.

TEACHER 1: So what do you mean 4, 6, 5, and 3? Where do you see those numbers?

STUDENT: Because a square can fit 4 students. A hexagon can fit 6 students. A pentagon can fit 5 students, and a circle can fit 3.

TEACHER 1: So you were looking at the number of students that can sit at each table, and for the style of table that would sit the most students at one table.

STUDENT: Mm-hmm.

TEACHER 1: Very good.

STUDENT: Go ahead and turn the page, boys and girls. Let's take a look at part two.

STUDENT: Teachers have given you permission to use two different styles of tables. What combination of tables will you use to seat all 42 students?

TEACHER 1: Very good. So this time, boys and girls, you have the opportunity to use two styles of tables. You and your group members need to decide on a combination of tables that you will use to sit all 42 students. If you take a look in the very back of your red folder, there is a packet of shape cards.

Once you and your group members have decided on an arrangement or a combination of tables, I would like you to cut out the shape cards to represent your tables and to glue them onto your

green piece of construction paper. I would like to see your table arrangement. I also want to see an algorithm, and number model that represents your table arrangement.

STUDENT: We did 3 rectangulars and 1 hexagonal.

TEACHER 1: So 3 rectangular tables, that'll sit how many people?

STUDENT: 36.

TEACHER 1: 36. How did you get 36, Adi? Because 12 times 3 is 36.

STUDENT: And 6 plus 6 is 12. So that you'd add [INAUDIBLE] and then for your 6, you get--

TEACHER 1: Where did you get the 6?

STUDENT: The hexagonal.

TEACHER 1: Oh, at the hexagonal table. So Adi, what did you do here? Let's take a look.

STUDENT: Actually, I did addition.

TEACHER 1: So Adi did 12 times 3.

STUDENT: That's 36.

TEACHER 1: Equals 36. And why did you do 6 times 1?

STUDENT: Because we have 1 hexagonal table.

TEACHER 1: 1 hexagonal table that'll sit 6 people.

STUDENT: That should--

TEACHER 1: Now, what did you do over hear on the far side?

STUDENT: I added those two numbers together.

TEACHER 1: 36 plus 6 equals 42.

STUDENT: That's what I did, 36 plus--

TEACHER 1: Do you guys have any remaining seats?

STUDENT: No.

STUDENT: No.

TEACHER 1: No. Excellent, great plan. So what's our plan back here?

STUDENT: So we're having 6 hexagonal and 2 rectangular, which will give us 42.

TEACHER 1: So can you show me in an algorithm?

STUDENT: Algorithm--

TEACHER 1: Anthony, let's see if we can help Maddie with the algorithm. How many rectangular tables do we have?

STUDENT: 2.

TEACHER 1: 2. How many can sit at each rectangular table?

STUDENT: That's 2, 4, 6, 8, 12.

TEACHER 1: 12. Very good. So what would that number model be to represent just the rectangular tables?

STUDENT: 12 times 1.

TEACHER 1: 12 times what?

STUDENT: 2.

TEACHER 1: 12 times?

STUDENT: 12 times 2.

TEACHER 1: Why 12 times 2?

STUDENT: Because you don't need to do--

STUDENT: Because there's only 2 rectangle tables.

TEACHER 1: There's 2 rectangular tables.

STUDENT: And then put it in quotation marks.

TEACHER 1: Parentheses.

STUDENT: Parentheses, sorry, and so that would be 24 times 6 equals 42.

TEACHER 1: Do we want a times 6 or do we want to--

STUDENT: Add 6.

TEACHER 1: How many hexagonal tables are you going to need?

STUDENT: We're going to need 6. If you have 6 hexagonal tables--

STUDENT: No, no, no. 3.

TEACHER 1: 3? What would your algorithm be for your hexagonal tables?

STUDENT: For our hexagonal tables it would be 24 times 3 equals 42.

TEACHER 1: 24? Can 24 people sit at your hexagonal tables?

STUDENT: No.

STUDENT: 2 times 12.

STUDENT: 6.

TEACHER 1: 6, very good. 6 times 3-- do you have your number model?

STUDENT: Equal 42. No, that doesn't equal 42. And then--

STUDENT: 6 times 3 equals 18.

TEACHER 1: 18, very good.

STUDENT: And then we need to add those. So 24 times--

TEACHER 1: Times? Do we want times 18?

STUDENT: No.

STUDENT: 6 times 3 equals 18.

STUDENT: And then-- I'm into it. Plus-- no, I don't want to do that. So it wouldn't be minus. Divide?

TEACHER 1: Well, so 24 and 18. 24 people can sit at the rectangular tables. 8 at the hexagonal tables. How can we find out how many students are sitting at tables in all?

TEACHER 2: You said it before.

STUDENT: Add.

TEACHER 1: Add, very good, Maddie. 3, 2, 1, 0. Who applied a property of multiplication today as they were working? Udae, what did you use?

STUDENT: Associative parentheses.

TEACHER 1: You used the associative property with the parentheses. Very good. Did anyone else use another property of multiplication? Adi?

STUDENT: Commutative.

TEACHER 1: Commutative property. How did you used the commutative property?

STUDENT: By turning the facts around.

TEACHER 1: By turning the facts around. Excellent job. Boys and girls, did we use math today to solve a real-life example?

STUDENT: Yes.

STUDENT: Yes.

STUDENT: Yes.

TEACHER 1: Do we use math on a daily basis?

STUDENT: Yes.

TEACHER 1: Yes, we do. All supplies should be back inside of your red folder. Materials should be back inside of your team bin.