CODE: 5

Background

Imagine you are teaching a math lesson to a class of 16 second grade students. The purpose of this lesson is to examine the ways properties of operations can be used to add numbers.

You have asked the students to work with a partner to solve the problem 27 + 23 using any method that works best for them. The partners have completed their work. Now you plan to select 3 individual students to present their work to the class.

Look at the strategies below and the descriptions of the students. Then choose which three students you would like to have present.

The Problem

27 + 23

Learning Goal

Your goal is for the students to be able to understand how properties of operation can be used to add numbers.

- · You want the students to understand that two numbers can be added in any order (commutative property).
 - Example: 3 + 4 = 4 + 3
- You also want the students to understand that 3 numbers can be regrouped and added in any order (associative property).
 - \cdot Example: 9 + (1 + 7) = (9 + 1) + 7

2nd Grade Student Descriptions Grace (she/her) Jada (she/her) Daniela (she/her) Grace is an Asian girl who Jada is a Black girl who Daniela is a Latina girl who speaks English as her first speaks English as her first speaks English as her first language. She has an IEP for language. She has no language. She has no dyslexia. She does not identified disabilities, and she identified disabilities, and she receive free or reduced lunch. does not receive free or does not receive free or reduced lunch. She has a She has a history of low reduced lunch. She has a success and average history of high success and history of average success participation during math high participation during math and low participation during lessons. She also plays lessons. She also plays on a math lessons. She also loves basketball. softball team. to dance. Strategy A Strategy B 27 + 23• I broke the 27 into 25 and 2. First I added 20 and 20 to get 40. Then I added the 2 and 23 to make 25. 25 + 2Then I knew that 25 plus 25 is 50 because 2 quarters are 50 cents. 25 40 + 3 = 43 25 + 2550 Oliver (he/him) Ava (she/her) Adriel (he/him) Oliver is a white boy who Ava is a white girl who speaks speaks English as his first English as her first language. language. He has no She has no identified identified disabilities, and he disabilities. She receives free does not receive free or or reduced lunch. She has a reduced lunch. He has a history of low success and low history of high success and participation during math high participation during math lessons. She also loves lessons. He also enjoys riding gardening.

Adriel is an Indigenous boy who speaks English as his first language. He has no identified disabilities, and he receives free or reduced lunch. He has a history of average success and low participation during math lessons. He also loves to play success and low participation soccer.

Aleiandro is a Latino boy who speaks Spanish as his first language. He is an EL student who speaks English at a beginner level. He has no identified disabilities. He receives free or reduced lunch. He has a history of low during math lessons. He also loves to play Minecraft.

Alejandro (he/him)

Camille (she/her)

Camille is a white girl who

speaks French as her first

student who speaks English

no identified disabilities, and

she does not receive free or

history of high success and high participation during math

reduced lunch. She has a

lessons. She also does

karate.

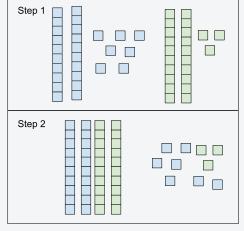
Then I added 3 more to get 43.

at an advanced level. She has

language. She is an EL

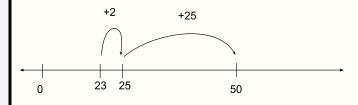


his bike.



- 1. I made 27 and 23 with the blocks.
- 2. I combined the tens together. Then I combined the ones. That's 4 tens, which is 40. Plus 10 ones, which is 50

Strategy D



- I started at 23.
- Then I took 2 from the 27 to make a jump of 2.
- That makes 25.
- Then I only needed to add 25 more, so I made another jump and got 50.

Carter (he/him) CJ (they/them) Mateo (he/him) Valentina (she/her) Carter is a Black boy who CJ is a gender fluid white Valentina is a Latina girl who Mateo is a Latino boy who speaks English as his first child who speaks English as speaks English as her first speaks Spanish as his first language. She has an IEP for language. He is an EL student language. He has no their first language. They have identified disabilities, and he no identified disabilities, and speech impairment who speaks English at an receives free or reduced they do not receive free or (stuttering). She does not intermediate level. He has no lunch. He has a history of reduced lunch. They have a receive free or reduced lunch. identified disabilities. He She has a history of average average success and little to history of high success and receives free or reduced average participation during success and low participation lunch. He has a history of high no participation during math lessons. He also loves to cook math lessons. They also love during math lessons. She also success and average and bake. to draw and paint. enjoys spending time in participation during math lessons. He also likes to play nature. the guitar. Strategy E Strategy F First, I added 7 and 3 27 to get 10. I put a zero 23 + 27 + 23 under the 7. I made it 23 + 27 because that's easier for 50 me to think about. Then I put the 1 up 23 + (2 + 25)Then I broke the 27 into 2 and 25. above the 2. Last I (23 + 2) = 25Then I combined the 2 with the 23, and I got added 1 + 2 + 2 to get Liam (he/him) Jackie (she/they) Mason (he/him) Angel (she/her) Liam is a white boy who Angel is a Black girl who Jackie is a white transgender Mason is a white boy who speaks English as his first girl who speaks English as speaks English as his first speaks English as her first language. He has no her first language. She has no language. He is on an IEP for language. She has no identified disabilities, and he identified disabilities. She severe ADHD. He receives identified disabilities, and she does not receive free or receives free or reduced free or reduced lunch. He has does not receive free or reduced lunch. He has a a history of high success and reduced lunch. She has a lunch. She has a history of low participation during math average success and low history of low success and low history of average success and average participation participation during math lessons. He also enjoys participation during math lessons. She also enjoys during math lessons. He also lessons. She also loves singing. loves comic books. animals. making origami. Strategy G Strategy H 1. I made 27 and 23 with the blocks 2. I pulled 2 apart from the 27 to make 25. 3. I put the 2 with the 23 to make 25. That makes 25 27 + 23• First I added 20 and 20 to get 40. + 25 which is 50. Then I added 7 and 3 to get 10. 20 + 20 = 40• Then I added 40 and 10 to get 50. 7 + 3 = 1040 + 10 = 50