CODE: 93

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 Jada (she/her) Mateo (he/him) Ava (she/her) Mason (he/him) Ava is a white girl who speaks Mason is a white boy who Jada is a Black girl who Mateo is a Latino boy who English as her first language. speaks English as her first speaks Spanish as his first speaks English as his first She has no identified language. She has no language. He is an EL student language. He is on an IEP for identified disabilities, and she who speaks English at an disabilities. She receives free severe ADHD. He receives does not receive free or intermediate level. He has no or reduced lunch. She has a free or reduced lunch. He has reduced lunch. She has a identified disabilities. He history of low success and low a history of high success and history of high success and receives free or reduced participation during math low participation during math high participation during math lunch. He has a history of high lessons. She also loves lessons. He also enjoys lessons. She also plays on a success and average gardening. singing. softball team. participation during math lessons. He also likes to play the guitar. 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. Then I added 3 more to get 43. 25 + 2Then I knew that 25 plus 25 is 50 because 2 quarters are 50 cents. 25 40 + 3 = 4325 + 2550 Grace (she/her) Oliver (he/him) Camille (she/her) Alejandro (he/him) Grace is an Asian girl who Oliver is a white boy who Camille is a white girl who Aleiandro is a Latino boy who speaks English as her first speaks English as his first speaks French as her first speaks Spanish as his first language. She has an IEP for language. He has no language. She is an EL language. He is an EL student dvslexia. She does not identified disabilities, and he student who speaks English who speaks English at a receive free or reduced lunch. does not receive free or at an advanced level. She has beginner level. He has no She has a history of low reduced lunch. He has a no identified disabilities, and identified disabilities. He success and average history of high success and she does not receive free or receives free or reduced participation during math high participation during math reduced lunch. She has a lunch. He has a history of low lessons. She also plays lessons. He also enjoys riding history of high success and success and low participation basketball. his bike. high participation during math | during math lessons. He also lessons. She also does loves to play Minecraft. karate. Strategy D Strategy C Step 1 1. I made 27 and 23 +2 +25 with the blocks. 2. I combined the tens together. Then I combined the ones. That's 4 tens, which is 40. Plus 10 ones, 25 23 0 50 which is 50. • I started at 23. Step 2 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.

CJ (they/them) Adriel (he/him) Carter (he/him) CJ is a gender fluid white Adriel is an Indigenous boy Carter is a Black boy who child who speaks English as who speaks English as his speaks English as his first their first language. They have first language. He has no language. He has no no identified disabilities, and identified disabilities, and he they do not receive free or receives free or reduced receives free or reduced reduced lunch. They have a lunch. He has a history of lunch. He has a history of history of high success and average success and low average participation during participation during math no participation during math math lessons. They also love lessons. He also loves to play to draw and paint. and bake. soccer. Strategy E Strategy F 27 23 + 27 + 23 I made it 23 + 27 because that's easier for 50 me to think about. 23 + (2 + 25)Then I broke the 27 into 2 and 25. (23 + 2) = 25Then I combined the 2 with the 23, and I got Angel (she/her) Liam (he/him) Valentina (she/her) Angel is a Black girl who Valentina is a Latina girl who Liam is a white boy who speaks English as her first speaks English as her first speaks English as his first language. She has no language. She has an IEP for language. He has no identified disabilities, and she speech impairment does not receive free or (stuttering). She does not does not receive free or reduced lunch. She has a receive free or reduced lunch. reduced lunch. He has a history of low success and low. She has a history of average history of average success success and low participation participation during math and average participation during math lessons. She also lessons. She also enjoys making origami. enjoys spending time in loves comic books. nature. Strategy G Strategy H 1. 1. I made 27 and 23 with

identified disabilities, and he average success and little to lessons. He also loves to cook math lessons. She also loves

Daniela (she/her) Daniela is a Latina girl who speaks English as her first language. She has no identified disabilities, and she does not receive free or reduced lunch. She has a history of average success and low participation during to dance.

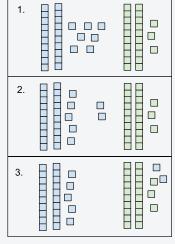
 First, I added 7 and 3 to get 10. I put a zero under the 7.

 Then I put the 1 up above the 2. Last I added 1 + 2 + 2 to get

identified disabilities, and he during math lessons. He also

Jackie is a white transgender girl who speaks English as her first language. She has no identified disabilities. She receives free or reduced lunch. She has a history of average success and low participation during math lessons. She also loves animals.

Jackie (she/they)



- 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 + 25 which is 50.

27 + 23

20 + 20 = 40

7 + 3 = 10

40 + 10 = 50

- First I added 20 and 20 to get 40.
- Then I added 7 and 3 to get 10.
- Then I added 40 and 10 to get 50.