

## GRADE 4. INTERPRETING REMAINDER.JKD.TRANSSCRIPT

**Teacher** 00:06

Class, we've been working on making sense of word problems. Today, we're going to start with the problem and the answer and write the word problem. I want you to write a word problem for 26 divided by 4, where the answer would need to be 7. Now that's a little strange, isn't it? Why?

**Student 1** 00:27

Cuz 4 times something doesn't give you 26

**Teacher** 00:31

You can't find a number that you can multiply by 4 to get 26. So, what does that mean?

**Student 1** 00:37

You might have a remainder.

**Teacher** 00:39

So, your job is to come up with a word problem using the numbers 26, and 4, so that you represent 26 divided by 4 and the answer to the word problem is 7. Go ahead and get started.

**Teacher** 01:06

Class come on back. I'm seeing a lot of word problems that look like this. Alex has 26 books. She wants to divide them into 4 equal groups. So how many books will she put in each group?

**Student 2** 01:22

The answer would be 6.

**Teacher** 01:24

So, you're right, the answer would be 6, we'd ignore the remainder here. But I challenged you to come up with a word problem where the answer would be 7. So, with this word problem, you ignore the remainder, and you got the answer of 6. How can we write a word problem, so the answer is 7? That's pretty tough. Talk about that at your tables.

**Student 3** 02:00

So, Mike has 26 pencils. Um...

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**Teacher** 02:05

What are you doing?

**Student 3** 02:06

I'm putting, um like, in packaging.

**Teacher** 02:11

Okay, so how many pencils are you going to put in each package?

**Teacher** 02:14

4.

**Teacher** 02:16

So, what's your question gonna be?

**Student 3** 02:17

Umm, how many pencils would he...hmm...

**Teacher** 02:26

So, she is saying how many pencils would he... and then you got a little confused

**Student 3** 02:30

Yeah.

**Teacher** 02:31

So, what do you guys think?

**Student 3** 02:33

Maybe...

**Student 4** 02:34

How many packages did...? How many packages...? How many pencils did Mike put in each package?

**Student 3** 02:41

Well, no, because we have that already. Like he puts 4 pencils in each package.

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**Teacher** 02:45

So, what could the question be?

**Student 3** 02:48

The question can be....

**Student 4** 02:49

How many packages are there?

**Teacher** 02:51

How many packages are there? Try that. And then talk about what answer you might get in your group.

**Teacher** 02:58

Class come on back. We're gonna look at one of the problems, may I use this? Thank you. So, here's the problem. Mike has 26 pencils. He puts 4 pencils in each package. How many packages are there? How many of you think the answer this problem would be 6 packages? How many of you think the answer to this problem would be 7 packages? So, you're all voting on 6? But what was our goal for this task? So how can we change this to make sure we would use 7 packages?

**Student 5** 03:48

Um, you, you can say that 26 divided by 7. And...

**Teacher** 03:58

Hold on. Let's think about this problem. I've got these 26 pencils. And I'm putting them in packages, how many pencils are going in each package?

**Student 5** 04:07

4.

**Teacher** 04:08

So how many packages would I need? You wanna help her out?

**Student 6** 04:16

6.

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**Teacher** 04:17

So, you say that there would be 6 packages of pencils. But we want the answer to be 7. What could we do?

**Student 7** 04:25

You can to the 26 you add 2 so in the problem you can maybe put his friends give him two more pencils. And then you can do 20. Now it'll be 28. So, you do 28 divided by 4 and then it'll be 7.

**Teacher** 04:42

And that would totally work, but I have 26 pencils. So, what am I going to do? So, I get an answer of 7. So, what happens when we use these 6 packages?

**Student 7** 04:52

There'll be a remainder of two pencils.

**Teacher** 04:57

Okay, so how can I write this word problem, with my 26 pencils, so I use up all the pencils and my answer 7? Do you want to help her out?

**Student 8** 05:09

Yay, since 4 um, 4 times 6 equals 24, you have two pencils left. So, you can add another package and put those two pencils in the other package.

**Teacher** 05:22

So how can we write this question to make sure we do that?

**Student 8** 05:26

They could put, how many packages are needed to use all the pencils?

**Teacher** 05:32

And so how do we reword the problem to make sure we get an answer of 7?

**Student 7** 05:37

How many packages would you need if you want to use all the pencils?

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**Teacher** 05:43

So, what do we have to do with those last two pencils?

**Student 7** 05:46

Put it in another package.

**Teacher** 05:48

So, what does she mean?

**Student 5** 05:49

You would have two left out pencils and then you'd have to put the two left out pencils inside another package.

**Teacher** 06:02

So how many packages would you use them?

**Student 5** 06:03

7.

**Teacher** 06:04

Nice thinking.

**Teacher** 06:06

Class, we've been making sense of interpreting the remainder. We've seen how we can change the wording of questions to get one answer versus another answer, nice thinking!