

JACOB DISSTON: I need another group who can tell me a different type of equation. Can you guys tell me a different type of equation? Derrick, you want to speak for your group?

STUDENT: No.

JACOB DISSTON: Can you?

STUDENT: No.

JACOB DISSTON: You sure?

STUDENT: Yeah, what?

JACOB DISSTON: Tell me a different type of equation. They pulled those out so what's another type of equation that you guys came up with?

STUDENT: $f \cdot 1$ equals...wait what?

JACOB DISSTON: I want you to come up and pull out a set of equations that we would not call property equations but we would give another name to it. You want to come up and separate them?

STUDENT: No.

JACOB DISSTON: Okay, Oliver you want to? Alright, you want to group those?

STUDENT: Yeah...no, no, this one.

JACOB DISSTON: Alright, even if they're not all there, tell me what you think about those.

STUDENT: These are all where you have to solve for a certain number.

JACOB DISSTON: Okay, so what should we call these?

STUDENT: Equations.

JACOB DISSTON: What kind of equations? Did you come up with a name?

STUDENT: No.

JACOB DISSTON: Anybody have a name for these?

STUDENT: Solving for the unknown.

JACOB DISSTON: Solving for the unknown...solving for unknown. Tell us why these are all in your mind solving for unknown. Step aside so people can see. If you need to move so you can see.

STUDENT: These are all solving for the unknown because for all of these you have to choose a different number as the variable for it to equal the number that it's suppose to.

JACOB DISSTON: So each one of those you might be trying to figure out what x is or what n is or what y is or what a is?

STUDENT: Yes.

JACOB DISSTON: So, I came around to groups and kind of in my way help people understand what I was asking people to do was to say "if this was on a test what might the instructions be?" "If you solve this on a test what would the instructions be?" What would you say Sara?

STUDENT: Solve for x .

JACOB DISSTON: And if this were on a test it might say?

STUDENT: Solve for n .

JACOB DISSTON: If this were on a test it might say?

STUDENT: Solve for a .

JACOB DISSTON: Yes, you had a question about this.

STUDENT: The thing is I don't think that should be in that category.

JACOB DISSTON: Why?

STUDENT: Because it's not solving for everything. Looks like is already been solved, like what the value y is.

JACOB DISSTON: Does everybody understand what Maria's objection is to what Oliver put?

STUDENT: Yes.

JACOB DISSTON: Can I have you guys just check in with each other to see if you agree with Oliver, Maria or you're not sure. So talk it over. What do you think, is $y=2$ a solve for type of equation?

STUDENT: I think that it does have an answer because...it's actually solved because y has to be 2. It can go on and on and on.

JACOB DISSTON: Meaning?

STUDENT: You could say $y=2$ and then $y=2$, so you can write $y=2$, $y=2$...

JACOB DISSTON: Okay. Maria your question was should $y=2$ be a solved for equation. Everybody else agrees $40=5x$ and $3+2n=8$ and $105+2a=101$. These are all solved for the variable, solve for the unknown? So Oliver you also say that $y=2$ also belongs there? Maria's saying no.

STUDENT: $Y=2$ belongs there because even though it looks like the finished product, you have to actually solve it. It can keep going on and on like this, so if you put $y=2$, you put $y=2$, $y=2$, but you still have to solve it.

JACOB DISSTON: So Sara you have a thought.

STUDENT: I think it's already solved because there's no other equation, there's no other number, no other variables to solve.

STUDENT: I agree.

JACOB DISSTON: Anybody over here in the same group as Oliver? What did you guys think?

STUDENT: I agree with Oliver.

JACOB DISSTON: Zoe.

STUDENT: I think it should be in the same group because all the other ones are basically the same thing...

STUDENT: No.

JACOB DISSTON: Tell me what you mean by the same thing.

STUDENT: They're both a variable equals a value but they just have different operations and more numbers (inaudible)

JACOB DISSTON: Are you convinced? Maria.

STUDENT: When you look at it, it just stands out because you're not solving anything. Basically it just looks like an answer; there's no other value to solve for.

JACOB DISSTON: I may have a way of maybe thinking about this in a different way. I think you're right, if we call this solving for unknowns, it's already known, but I might say that "how many different numbers could make this true?" How many different values of x ?

STUDENT: One.

JACOB DISSTON: One, what is it?

STUDENT: Eight.

JACOB DISSTON: Eight. Ron do you agree $8 \dots 5 * 8 = 40$? How many different numbers make this one true, $3 + 2n = 8$? How many different numbers make it true?

STUDENT: One.

JACOB DISSTON: One of them. What is it?

STUDENT: 2.5

JACOB DISSTON: 2.5. How many numbers make this true?

STUDENT: One.

JACOB DISSTON: How many numbers make this true?

STUDENT: One.

JACOB DISSTON: So, there may be ways that we could say that these are all the same and there may be ways that you could say this one is different. I think what's important is that we have rationale; we have reason behind why we are saying it belongs or it doesn't belong. I'm happy that you guys are still saying this one stands alone, this one is a strange equation symbol string and you guys are saying it's like the others. I think that's good. So thank you for coming up.