

Scripted Example: This is an ideal scenario in which students respond with the answers I would want to hear, but as your students begin to engage in this type of questioning, it will become easier for them to respond in the most mathematically appropriate way. For the sake of this example, I have included five fictional student names—Matt, Janet, Steve, Daniel, Casey—to show how I would employ cold calls throughout the example.

Teacher: *“Let’s take a look at a problem together. We are solving for X in the equation below.”*

$$3x + 10 = 40$$

“Casey, what do you think I should do first?”

Casey: *“I think you should subtract 10”*

Teacher: *“Ok. Janet, what do you think about Casey’s answer?”*

Janet: *“I think we actually need to subtract 10 from both sides.”*

Teacher: *“Interesting! Matt, why would Janet say that?”*

Matt: *“We need to subtract from both sides so that the equation stays equal on both sides.”*

Teacher: Model subtracting on both sides and rewrite equation: $3x = 30$

“Ok now we aren’t done yet. What should I do next, Steve?”

Steve: *“Now you need to get X by itself”*

Teacher: *“Yes! Daniel, how can I get X by itself?”*

Daniel: *“You can divide both sides by 3 to get x along.”*

Teacher: *“Great! Casey, why do I need to use division here?”*

Casey: *“You need to divide because you have to use the inverse operation of multiplication.”*

Teacher: *“So, Janet what would our final answer be?”*

Janet: *“ X is equal to 10.”*

Teacher: *“Matt, how do we know that we are done solving?”*

Matt: *“We know because we have x by itself.”*

This example outlines how these questioning strategies can be used in class. Ultimately, each teacher will need to identify how to best apply these strategies with his or her own students so that all students have the opportunity to participate, feel successful, and master challenging content.