

Transcript – Case Studies: K-2 Instructions

Now let's tie it all together by examining two case studies.

Take a moment to review the student work samples for Student A and Student B.

What evidence exists that indicates that Student A has computational fluency? What evidence exists that indicates that Student A has mathematical proficiency? What evidence is missing?

Record your observations in your Case Study Recording Sheet journal page.

What evidence exists that indicates that Student B has computational fluency? What evidence exists that indicates that Student B has mathematical proficiency? What evidence is missing?

Transcript – Case Studies: K-2 Possible Responses

You may have noticed that Student A correctly represents the traditional algorithm for subtraction; however, we do not know whether or not this student is able to solve the problem using a variety of strategies based on place value as stated in 2(4)(C). This student appears to have used the key word "less" to solve the problem instead of reading the problem for understanding. This student did not answer the question.

You may have noticed that Student B appears to rely on pictorial models to solve the problem, which resulted in the student getting lost when he was required to regroup with tens. It may also be that this inefficient strategy resulted in the student's running out of time. However, this student was able to recognize the parts of this multi-step problem and knew which operations were necessary to solve the problem.

What next steps might the teacher take to address computational fluency and mathematical proficiency?

Transcript – Case Studies: 3-5 Instructions

Now let's tie it all together by examining two case studies.

Review the student work samples for Student A and Student B.

What evidence exists that indicates that Student A has computational fluency? What evidence exists that indicates that Student A has mathematical proficiency? What evidence is missing?

Record your observations in your Case Study Recording Sheet journal page.

What evidence exists that indicates that Student B has computational fluency? What evidence exists that indicates that Student B has mathematical proficiency? What evidence is missing?

Transcript – Case Studies: 3-5 Possible Responses

You may have noticed Student A used the long division algorithm accurately, but he did not consider all of the attributes of the problem situation. Student A focused on the phrase “shared equally” and immediately associated the phrase with division without considering other elements of the problem situation.

You may have noticed Student B’s work suggests that she is considering all elements of the problem situation and can associate the appropriate operation with each element of the situation. However, when Student B attempts the computation, she gets bogged down in the division algorithm because she does not understand the role of place value. The skip-counting on the left side of the page indicates that she does not have facility with multiplication facts.

What next steps might the teacher take to address computational fluency and mathematical proficiency for each student? Record your observations in your Case Study Recording Sheet journal page.

Transcript – Case Studies: 6-8 Instructions

Now let’s tie it all together by examining two case studies.

Review the student work samples for Student A and Student B.

What evidence exists that indicates that Student A has computational fluency? What evidence exists that indicates that Student A has mathematical proficiency? What evidence is missing?

Record your observations in your Case Study Recording Sheet journal page.

What evidence exists that indicates that Student B has computational fluency? What evidence exists that indicates that Student B has mathematical proficiency? What evidence is missing?

Transcript – Case Studies: 6-8 Possible Responses

You may have seen that Kris’s work [Student A] provides evidence that he can multiply decimals accurately and appears to have computational fluency. He does appear to have some conceptual understanding that there is a multiplicative relationship in the problem. He does not, however, appear to have mathematical proficiency as he did not recognize the need for multiple operations and just multiplied the three numbers.

You may have seen that Pat [Student B] appears to have correctly identified the mathematical relationships within the problem and was able to write out her own plan, so she appears to have the conceptual understanding in place to solve the problem. Pat appears to not have computational fluency with multiplying multi-digit numbers. She does not get a correct answer for dividing with decimals and runs out of time to complete the problem.

What next steps might the teacher take to address computational fluency and mathematical proficiency for each student?