<u>Prompt ideas for students :</u>

- Our prompts need to be REALLY specific. Prompts like "show me more work" are less helpful than "tell me why you added 15 + 15 + 15". Figure out what you are wondering or is wrong and give them specific hints about that. We don't want to overload them by giving to many hints about too many things, but we do want to give them enough to improve since they will be revising their work. Here are some general guidelines:

  1. Did they get the problem correct? If NOT, give hints to help them get the correct answer. You may also want to focus on communication. If they are quite close you may also suggest they check their work, but if they are not at all close then we just want to get them to the right answer.
  2. If they got the problem correct, you may wish to focus on getting them to communicate better (being sure to use units, draw a graph or show a calculation that goes with their work as appropriate) and checking their answer. Again ask specific questions like "Can you tell me why you added 15+15 and then 30+30?"

<u>Here are some more specific ideas for students depending on their errors:</u>

<u>If the student got 45 (something like 15+15+15) , or took ½ of 15 the following is likely the problem:</u>

- These students are using the ½ concept wrong. For some, they need to understand that ½ IS half of what was left over, not that they need to take ½ of 15 (or 30). For others they need to understand that the ½'s refer to <u>different wholes</u>. For the dog ½ of the bag is 15, but for the brother, ½ of the bag is 30.

- Here are some ideas for prompts you might use. Feel free to edit, they might be a little confusing as is. You can incorporate these as "hints" in your letters.

"I see that you correctly found that the dog ate 15 pieces of candy. Remember the dog ate half of what was left *after* the brother ate some candy. The brother ate more than 15 pieces because he ate half of the entire <u>full bag</u>. You are on the right track, here is a hint to help you:
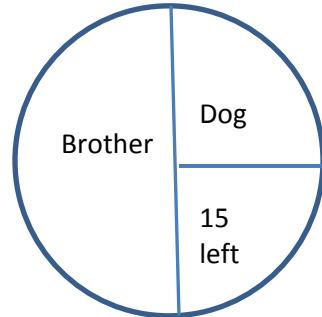
If there were 15 pieces left over after the dog ate some, how many pieces were left <u>before</u> the dog ate any? Another way to think about that is what number divided in half gives you 15?

Once you know the number of pieces in the bag before the dog ate some, you know how much was in the bag <u>after</u> the brother ate some. From this can you figure out how many pieces were in the full bag (<u>before </u>the brother ate ½ of the bag)?

Once you have your answer, be sure to check it. Pretend your bag has that many pieces of candy. Then read the problem again and figure out how many pieces the brother ate, how many the dog ate and see if you are left with 15 pieces. If not, got back and try the problem again. I can't wait to see you try again!"

Another idea (if they drew an incorrect diagram)
"Drawing a diagram was a good idea, but your numbers aren't quite right. Try filling in this diagram with the correct numbers.

Remember 15 pieces of candy was what was left over after the dog ate ½ of the remaining, so how many pieces did the dog eat?

 Both halves of the circle should have the same number of pieces of candy in them.

Once you fill in the diagram, be sure to explain to me exactly how you got your numbers. Don't leave out any steps! And don't forget to state your final answer in a complete sentence (put a box around it for me so I don't miss it!)

Finally be sure to go back and check your answer. Start with the total number of pieces in the bag and work through the problem to make sure you get the same numbers you put in the diagram for the number the dog and brother ate and that there are 12 left over. If not, you have to try again!"

If the student did the Challenge Problem
- If the student did the challenge problem be sure to compliment them on it if they got it right or give some comment if they got it wrong
- Example "I was glad to see you try the challenge problem." and then give a hint on how to help them get it right for example, "Remember the fraction has to do with how many pieces he ate out of the total number of pieces of candy in a full bag"

If the student got all 4's and/ or 5's

- If the student did not try the challenge, encourage them to do so.

- Now we want to encourage them to get all 5's or even some 6's. Tell them something like this

"You got all 4's – now I'm going to give you some ideas for how to get all 5's! I'll bet you can do it!"

Some ideas (adjust accordingly for your particular student)

For MS "You did a good job writing down what you knew, but to get an even higher score in Making Sense (MS) I'd like to see you explain in more detail and label all of your numbers. Show how you are using the idea of ½ in the problem and tell me more about how your number sentences relate to your explanations."

For RS "To get a higher score in Representing and Solving (RS) you could explain how the two different methods you used to solve the problem are related to each other. How do your addition problems relate to your diagram?"

OR "One way to get a higher score in Representing and Solving (RS) is to try to generalize the problem. An example of this would be to explain how to solve it if the number left were something different than 15. Is there an easy way to tell someone how to do this problem no matter how many pieces were remaining?"

For CR "I understand how you did your work, but you could get a higher score in Communicating Reasoning (CR) if you added in some examples or a diagram and referred to those in your explanation. For example you say that you know that ½ of 30 is 15, but is there a computation you can write down to go with that (did you divide? multiply?)"

For ACC "It is hard to get a higher score than 4 in Accuracy (AC) but one way to do that is to ask questions that lead to new problems. You can do this by just writing a comment on your paper. For example, "I wonder what would happen if there were 20 pieces left instead of 15? (Maybe you can even answer that one!)"

For RE 4 "I was so happy to see you completely checked all of your work. To get an even higher score in Reflecting and Evaluating (RE) I'd love to see you check the problem in a <u>different way</u>. Maybe you could use division instead of multiplication this time."

For RE 5 "I see that you have done the problem in two different ways. That got you a 5 in Reflecting and Evaluating (RE). I think you can even get a 6! But to get a 6 you'd need to add in some comments to your paper reflecting on your work. Tell me which way you thought was easier and why. Do you think someone else might interpret the problem differently? Can you think of a hint you would give that person?"

- For the student who did almost nothing sensible we may just want to give a "quick thanks for the effort", then get on to helping them. It won't be useful to go over their work if it won't help them get the right answer. Our goal for this student is to be direct, simple, and to get them started. Don't worry about too many other prompts for explaining or checking, etc. Here's one idea:

For someone who had no idea what to do Idea 1

Suggest a diagram like the one above and some hints to go with it.

For someone who had no idea what to do Idea 2

"Thank you for working on the candy problem. It was nice to hear from you again. Your answer wasn't quite right, but I'm going to give you some hints to get started.

Let's try to work backwards. The problem says that there were 15 pieces of candy left <u>after</u> the dog ate ½ of what was left. So we want to figure out how much was left <u>before</u> the dog ate some. Remember if you have ½ left you can double it to figure out how much was left before the dog ate any. **(OR, What number divided in half gives you 15?)**

Once you get that number, we want to go backwards again and figure out how many pieces were there before the brother ate some. Again, the brother ate ½ of the amount, so can you use the answer you found before to find the original number (Hint: Double it again**! OR What number divided by two gives your answer?)**

Note to WOU students (I am suggesting two ideas here, either the doubling or the bold – you don't want to use both ideas, just choose 1).