What makes this good?

The student clearly understands her mistake (writing a range of values) and also understands the difference between a discrete set of numbers (i.e., -2, 0, 7) and a continuous set of numbers, which would imply a whole range (an infinite amount) between two values (i.e., her orginal answer, which was \(-2 \leq y < 7\)).

What might make it better?

Mostly great .. maybe another example of a continuous vs. a discrete range to further illustrate her understanding.
What makes it good?

The student clearly understands what she did wrong regarding order of operations. She also illustrates how to substitute the -2 into the expression, but having parantheses “hold” the value, before doing any of the operations.

What might make it better?
Possibly commenting a bit further on substituting values in to an expression with exponents and maybe showing the parentheses for substitution on all terms like this:

\[
\frac{a^2 - b^2}{6c} = \frac{4^2 - (-2)^2}{6(-5)} = \frac{16 - (4)}{6(-5)} = \frac{12}{-30} = \frac{-2}{5}
\]

In this problem, I didn’t think through order of operations and instead of squaring “-2”, I made it a positive 2 first, then squared it. That caused me to add 4 to 16 when I should’ve subtracted every step, and not simplify too soon, so that I do not miss any important step in the order of operations like I did this time. Exponents come before multiplication and I didn’t do that here.
What makes it good:
Again, this was related to problem 14, but in this case, the student didn’t know what to write in the middle of the values, so he wrote the words “domain” and “range.” In his explanation, you can see that he understands that $x$ represents the domain and $y$ represents the range, and relates this further to input and output.

What could make it better?
I think this is pretty thorough. The mistake wasn’t a huge one, and he explains the concept clearly. Maybe he could extend the definition a bit in his own words, for instance saying that domain is the set of $x$ values that have a “home” or place on the function.

What makes this good?
Student explains his definition of a function and then goes on to provide an possible function that would have given the result indicated!

What could make it better?
The sample function really confirms his understanding; maybe he could have included terms like “input” and “output” in his explanation.
What makes it good? The student gives a very clear and helpful explanation for why horizontal lines always have a slope of zero, and why vertical lines always have an undefined slope. She offers both an algebraic explanation and a visual drawing involving a car on a slope. She also understands that in a fraction, zero in the numerator implies an overall value of zero, and that zero in the denominator is always undefined.

What could make it better? Maybe offering a reason as to why the images of the cars might help one remember the slopes. Also, choosing two actual points on one of the lines and putting them into the slope formula might help further illustrate this idea. For example, the points \((-5.7, 3)\) and \((-5.7, 6)\) must be on the line \(x=-5.7\), so if you put those into the slope formula you get \(\frac{6 - 3}{(-5.7) - (-5.7)}\) which is \(\frac{3}{0}\) which is undefined.