Instruction

Lesson 4.1.1: Creating Exponential Equations in One Variable

Georgia Standard of Excellence

MGSE9–12.A.CED.1★

Warm-Up 4.1.1 Debrief

- Students will hopefully recognize this scenario as modeling a linear inequality: $70x + 100 > 500$, where x is the number of months Zachary has been babysitting.

- Solving this equation for x gives an approximate value of $x > 5.71$ months. However, in the context of the problem, we need to round to a whole number of months. In this case, it would not be accurate to round x up from 5.71 to 6, because doing so would exclude "6 months" from the possible solutions for the number of months since school started. Therefore, we must round down, so that $x > 5$.

- Encourage students to make meaning of the numerical answer, "School started more than 5 months ago."

Connection to the Lesson

- Students will be required to create equations from context, except the equations will be exponential instead of linear.

- Students will also be required to interpret the solutions in context, rather than just stopping at solving the equation for the numerical answer.