

This task is to help me know what you know and how I can help you. Don't worry. Try your best.

Name Student A

An equation is shown, where a , b , and c are integers.

$$y = a|x + b| + c$$

Kyle claims that this equation will always have two roots.

Sandy claims that this equation will always have zero roots.

Using integers from -5 to 5 create an equation that supports Kyle's claim and describe the effects of the parameters a , b , and c on the shape and position of the graph.

$$y = \boxed{3}|x + \boxed{2}| + \boxed{-5}$$

The equation when I graph it has vertex $(-2, 5)$ and opens up. It crosses x axis twice.

Using integers from -5 to 5 create an equation that supports Sandy's claim and describe the effects of the parameters a , b , and c on the shape and position of the graph.

$$y = \boxed{-3}|x + \boxed{2}| + \boxed{-5}$$

The equation when I graph it has vertex $(-2, -5)$ and opens down so doesn't cross x axis.

Using integers from -5 to 5 create an equation that disproves Kyle's and Sandy's claims and describe the effects of the parameters a , b , and c on the shape and position of the graph.

$$y = \boxed{3}|x + \boxed{0}| + \boxed{-5}$$

The equation has vertex $(-5, 0)$ so hits the x -axis once.