Break-Ground:

Zoom out

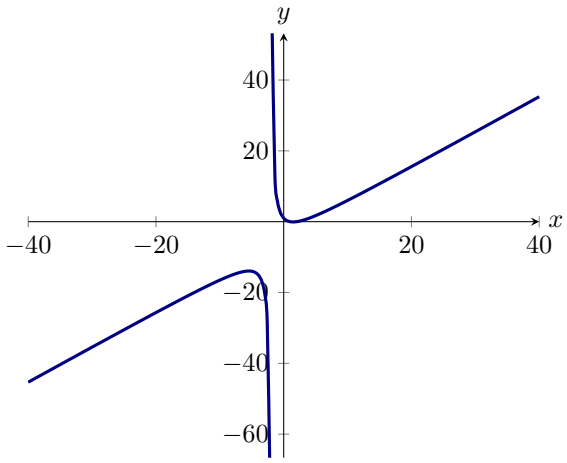
Two young mathematicians discuss what curves look like when one "zooms out."

Check out this dialogue between two calculus students (based on a true story):

Devyn: Riley, think about this function:

$$f(x) = \frac{x^2 - 3x + 2}{x + 2}.$$

Riley: Hmmm. If you plot it, the graph looks like this:



Devyn: Right! What I've noticed is that if x gets big, then our function looks like a line.

Riley: I wonder how we find the line?

Problem 1 *Devyn and Riley have noticed that the function* $f(x) = \dfrac{x^2 - 3x + 2}{x + 2}$ *looks like a line when we zoom out. Guess the slope of this line. Come back and check your answer after reading the Dig-In!*

Free Response: *Answers may vary.*

Learning outcomes: Approximate a slant asymptote from the graph of a function.

Zoom out

Problem 2 *Guess the y-intercept of this line. Come back and check your answer after reading the Dig-In!*

Free Response: *Answers may vary.*