- Let $f(x) = \dfrac{x^2+1}{(x-3)(x+2)}$. Determine the vertical asymptotes of the graph of f.

THE DENOMINATOR IS ZERO WHEN $X=3$ OR $X=-2$.

NEITHER OF THESE X-VALUES MAKE THE NUMERATOR ZERO:

$(3)^2+1=10$ $\qquad$ $(-2)^2+1=5$

THE VERTICAL ASYMPTOTES ARE $X=3$ AND $X=-2$.