

# SHAPE OF A GRAPH

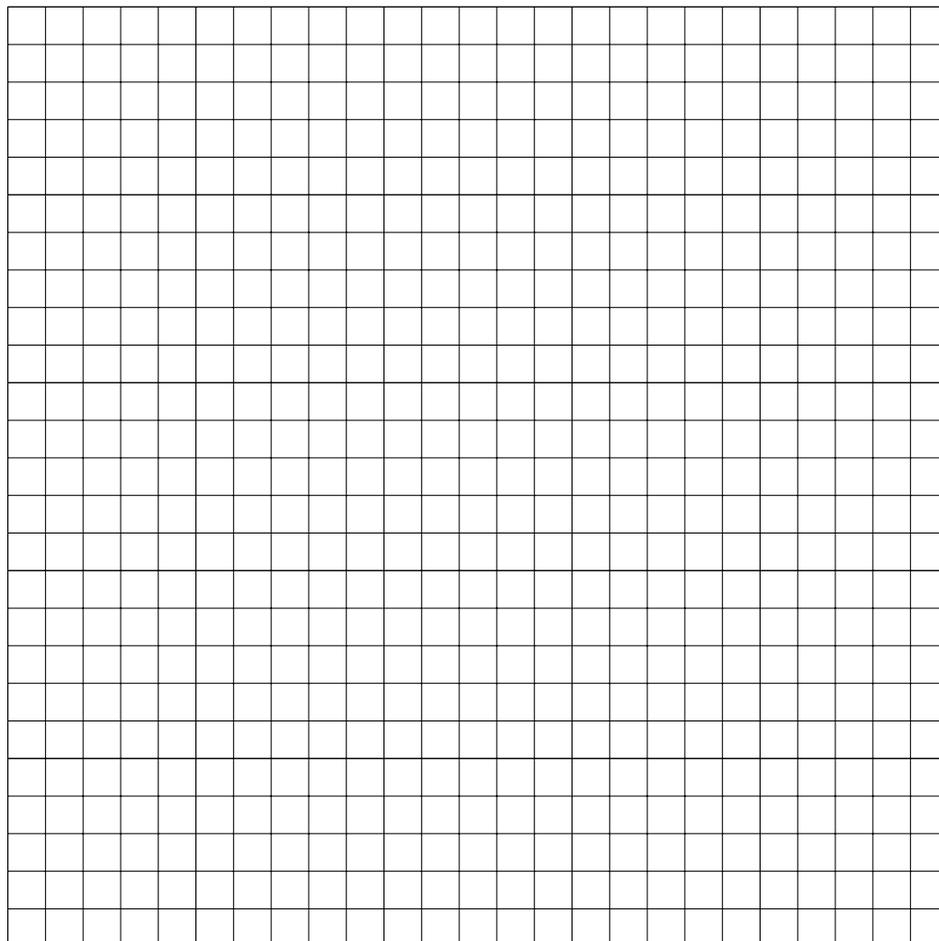
TEXT: 3.3

LAST NAME	FIRST NAME	DATE
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1 (10 points). For the given function,

- find vertical and horizontal asymptotes
- find intervals of increase and decrease
- find local extrema
- describe intervals of concavity and find inflection points
- sketch the graph

$$f(x) = \sqrt{x^2 + 1} - x$$



2 (10 points). For the given function,

- find vertical and horizontal asymptotes
- find intervals of increase and decrease
- find local extrema
- describe intervals of concavity and find inflection points
- sketch the graph

$$g(x) = x - \frac{1}{6}x^2 - \frac{2}{3}\ln(x)$$

