Grade 12 GEN

Lesson 7- 4

Graphing Rational Functions

Objectives

Graph and analyze rational Functions with oblique asymptotes

Mathematics

Module-7- 2025-2026

وزارة التربية و التعليم

Term-3

Rational Functions and Relations

AL-QUDRA SCHOOL

MR-Rachid K

Example 1:

For each rational function, determine whether its graph has an oblique asymptote. If it does, write its equation.

a) $y = \dfrac{x^2 - 2x - 5}{x - 1}$

a: y = x + 1

b: y = x - 1

c: y = x - 2

d: y = x + 2

Choose here

b) $y = \dfrac{x^2 - 7x + 1}{x - 5}$

a: y = x + 1

b: y = x - 1

c: y = x - 2

d: y = x + 2

Choose here

LIVEWORKSHEETS

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Graph and analyze rational Functions with oblique asymptotes

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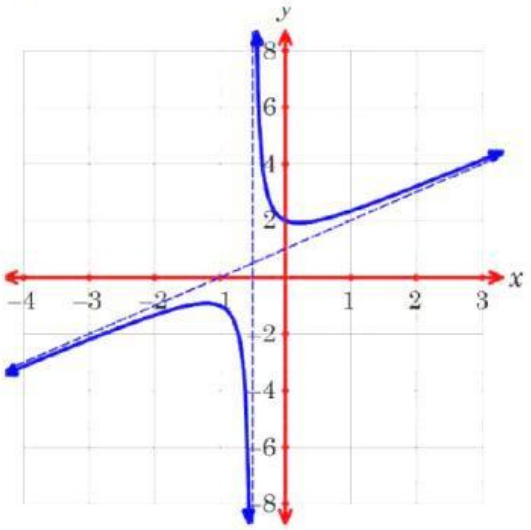
Example 2: Find the asymptote of

$$g(x) = \frac{2x^2 + 3x + 2}{2x + 1}$$



There is a vertical asymptote at

a: X = 1

b: X = 1/2

c: X = -1/2

d: X = 2

Choose here

There is an oblique asymptote

a: y = x + 1

b: y = x − 1

c: y = x − 2

d: y = x + 2

Choose here

LIVEWORKSHEETS