

Algebra II Rational Expression and Functions Review

Lesson 095 | Algebra II | Rational expressions and graphs

https://www.youtube.com/watch?v=0_LAX2eyaW4

Original practice aligned to the saved video title.

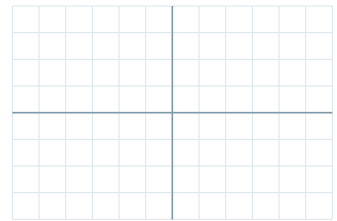
Name: _____ Date: _____ Show your reasoning.

01

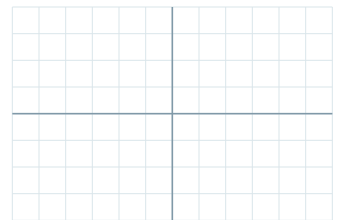
Simplify $(x^2 - 8x - 48)/(x - 12)$ and identify the excluded input and hole.

02

Analyze and sketch $f(x) = 7/(x - 5) + 11$. Give domain, asymptotes, intercepts, and two points.

**03**

Analyze and sketch $f(x) = 2/(x - 1) + 9$. Give domain, asymptotes, intercepts, and two points.



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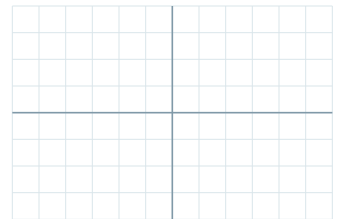
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04

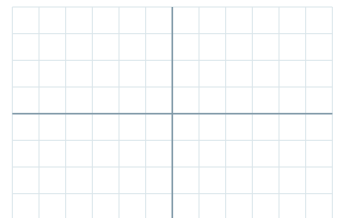
Simplify $(x^2 - 8x - 65)/(x - 13)$ and identify the excluded input and hole.

05

Analyze and sketch $f(x) = 3/(x - 2) + 11$. Give domain, asymptotes, intercepts, and two points.

**06**

Analyze and sketch $f(x) = 4/(x - 7) + 11$. Give domain, asymptotes, intercepts, and two points.



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01

Simplify $(x^2 - 8x - 48)/(x - 12)$ and identify the excluded input and hole.

Factor the numerator as $(x-12)(x+4)$. Cancel for $x \neq 12$; simplified rule $x+4$. The original domain excludes 12; the hole is (12, 16).

02

Analyze and sketch $f(x) = 7/(x - 5) + 11$. Give domain, asymptotes, intercepts, and two points.

Domain $x \neq 5$; vertical asymptote $x=5$; horizontal asymptote $y=11$. Zero: $x = 48/11$. y-intercept $48/5$. Points (6, 18) and (4, 4).

03

Analyze and sketch $f(x) = 2/(x - 1) + 9$. Give domain, asymptotes, intercepts, and two points.

Domain $x \neq 1$; vertical asymptote $x=1$; horizontal asymptote $y=9$. Zero: $x = 7/9$. y-intercept 7. Points (2, 11) and (0, 7).

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04

Simplify $(x^2 - 8x - 65)/(x - 13)$ and identify the excluded input and hole.

Factor the numerator as $(x-13)(x+5)$. Cancel for $x \neq 13$; simplified rule $x+5$. The original domain excludes 13; the hole is (13, 18).

05

Analyze and sketch $f(x) = 3/(x - 2) + 11$. Give domain, asymptotes, intercepts, and two points.

Domain $x \neq -2$; vertical asymptote $x=-2$; horizontal asymptote $y=11$. Zero: $x = -25/11$. y-intercept $25/2$. Points $(-1, 14)$ and $(-3, 8)$.

06

Analyze and sketch $f(x) = 4/(x - 7) + 11$. Give domain, asymptotes, intercepts, and two points.

Domain $x \neq -7$; vertical asymptote $x=-7$; horizontal asymptote $y=11$. Zero: $x = -81/11$. y-intercept $81/7$. Points $(-6, 15)$ and $(-8, 7)$.