

اختبر نفسك (3)

Check yourself (3)

Mathematics الرياضيات

الصف الثاني عشر متقدم

الفصل الثاني

2024-2025

Lesson 4-6 (Overview of Curve Sketching)

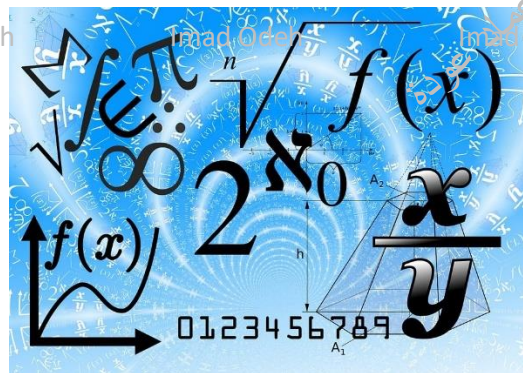
according to the previous exam

مراجعة الدرس السادس (رسم المنحنيات)

من الوحدة الرابعة اعتمادا على

الاختبارات السابقة

الأستاذ عماد عودة



اسم الطالب: -



الأستاذ عماد عودة 0507614804

<https://t.me/lomaths12>

<http://www.youtube.com/@imaths2022>

س1 اوجد جميع خطوط التقارب الراسية للدالة

Q1 Find all vertical asymptotes of the function

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

a) $y = 0, y = 2$

b) $x = 0$

c) $x = 1, x = -1$

d) $y = 1$

س2 اوجد جميع خطوط التقارب الراسية للدالة

Q2 Find all vertical asymptotes of the function

$$f(x) = \frac{3x^2}{x^2 - 4}$$

a) $y = 3, x = -2, x = 2$

b) $y = 3, x = 4$

c) $y = 0, x = -2, x = 2$

d) $y = 3, x = -4, x = 4$

س3 اوجد الدالة التي يكون لتمثيلها البياني خطوط التقارب

Q3 Find a function whose graph has the given asymptotes.

$$y = 8, x = 3, x = -8$$

a) $f(x) = \frac{8x^2}{x^2 + 5x - 24}$

b) $f(x) = \frac{8+x^2}{x^2 - 5x - 24}$

c) $f(x) = \frac{8x^2}{x^2 - 5x - 24}$

d) $f(x) = \frac{8+x^2}{x^2 + 5x - 24}$

س4 اوجد الدالة التي يكون لتمثيلها البياني خطوط التقارب

Q4 Find a function whose graph has the given asymptotes.

$$y = 3, x = 1, x = 2$$

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

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

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

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

Q5 Find a function whose graph has the given asymptotes.

س5 اوجد الدالة التي يكون لتمثيلها البياني خطوط التقارب

$$y = -2, y = 2, x = -1, x = 1$$

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

b) $f(x) = \frac{(x^2 - 4)}{\sqrt{(x-1)(x+1)}}$

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

d) $f(x) = \frac{4-x^2}{\sqrt{(x-1)(x+1)}}$

Q6 Find a function whose graph has the given asymptotes.

س6 اوجد الدالة التي يكون لتمثيلها البياني خطوط التقارب

$$y = -5, y = 5, x = -3, x = 2$$

a) $f(x) = \frac{5x}{\sqrt{(x+3)(x-2)}}$

b) $f(x) = \frac{(x^2 - 25)}{\sqrt{(x-3)(x+2)}}$

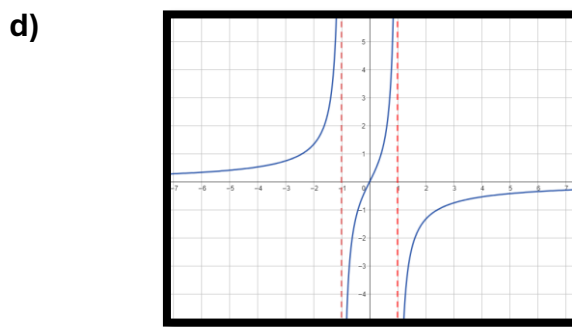
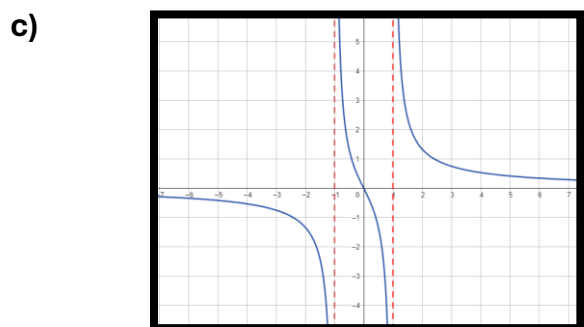
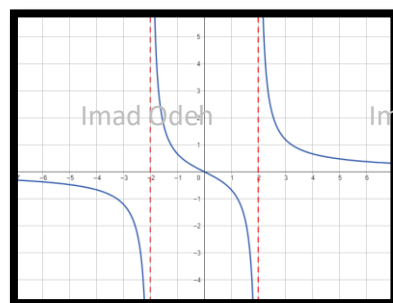
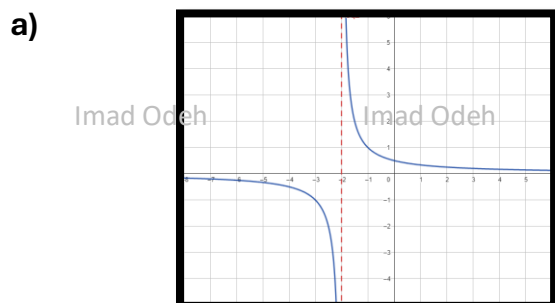
c) $f(x) = \frac{5x}{\sqrt{(x-3)(x+2)}}$

d) $f(x) = \frac{x^2 - 25}{\sqrt{(x+3)(x-2)}}$

Q7 Determine the graph of the function

س7 حدد التمثيل البياني للدالة

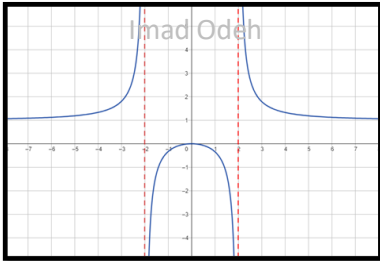
$$f(x) = \frac{2x}{x^2 - 1}$$



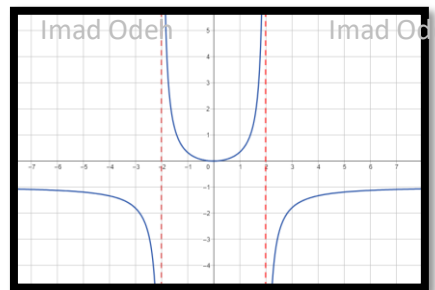
Q8 Determine the graph of the function

$$f(x) = \frac{x^2}{x^2 - 4}$$

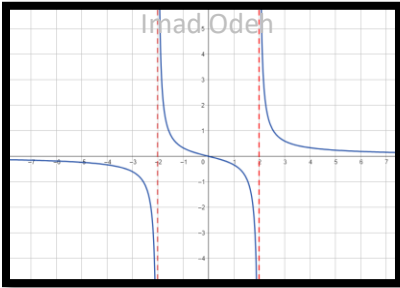
a) Imad Odeh



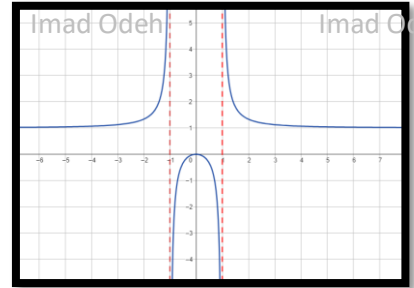
b) Imad Odeh



c) Imad Odeh



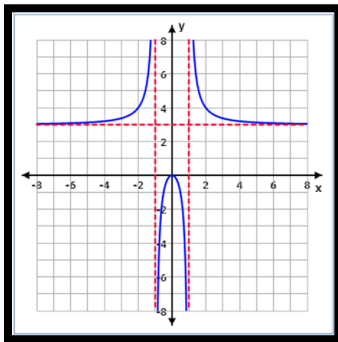
d) Imad Odeh



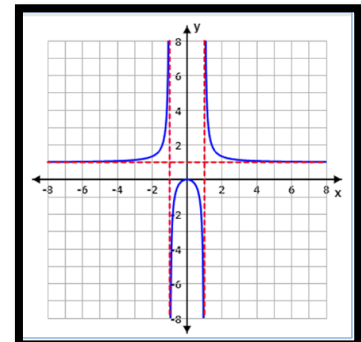
Q9 Determine the graph of the function

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

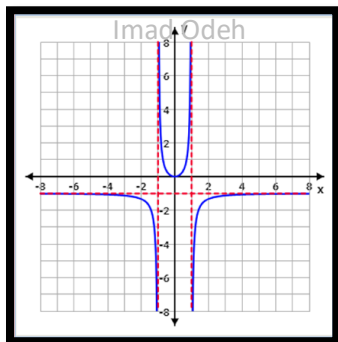
a) Imad Odeh



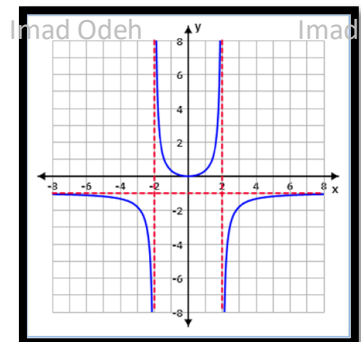
b) Imad Odeh



c) Imad Odeh



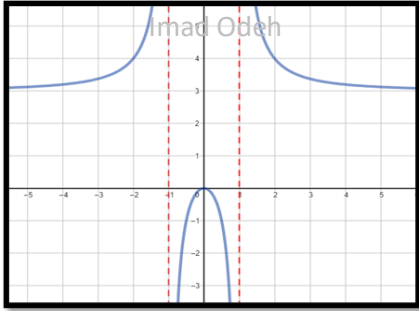
d) Imad Odeh



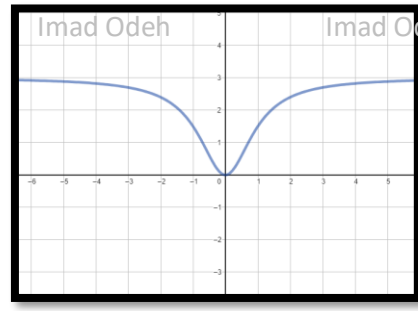
Q10 Determine the graph of the function

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

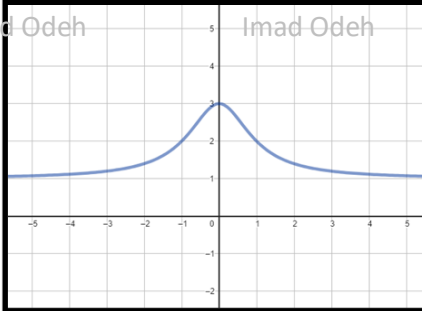
a)



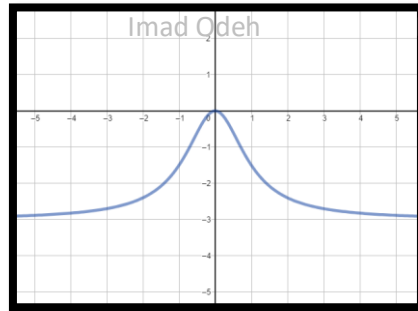
b)



c)



d)



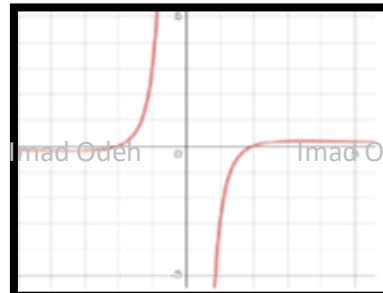
Q11 Determine the graph of the function

$$f(x) = \frac{x^2 + 4}{x^3}$$

a)



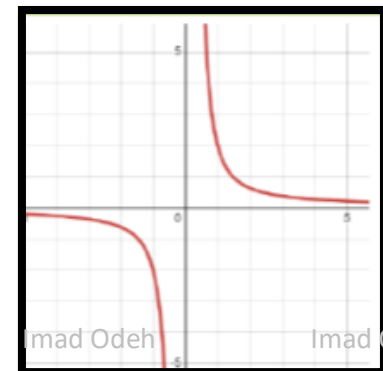
b)



c)

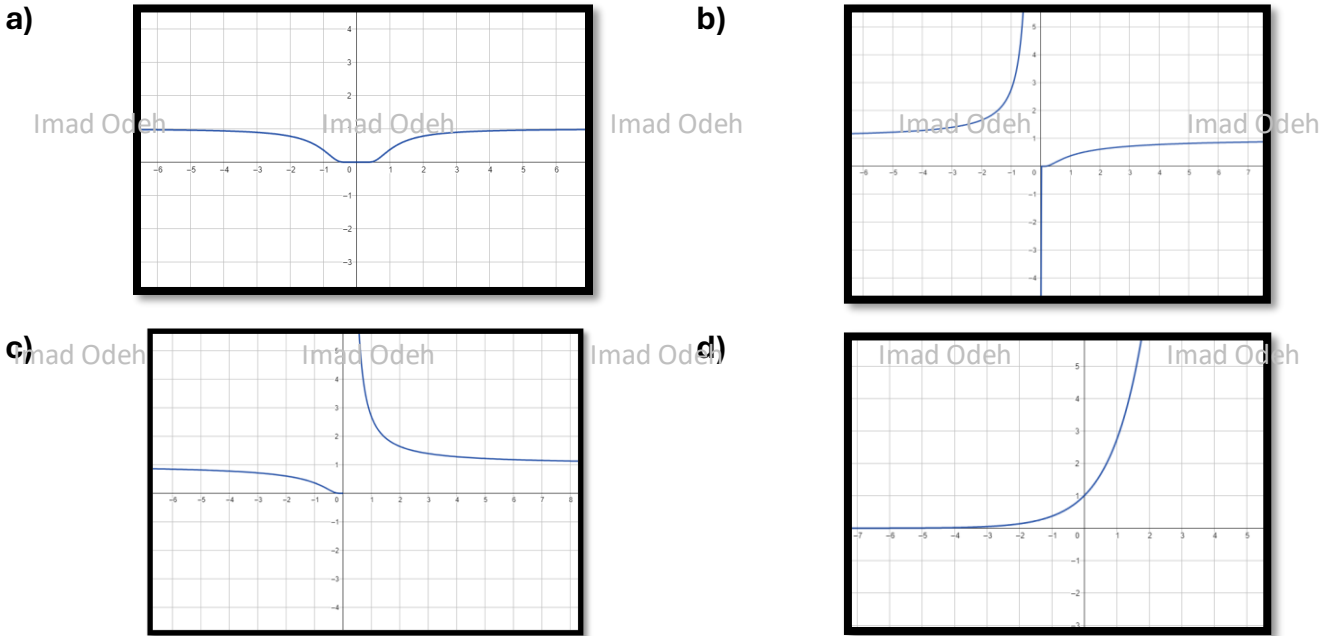


d)



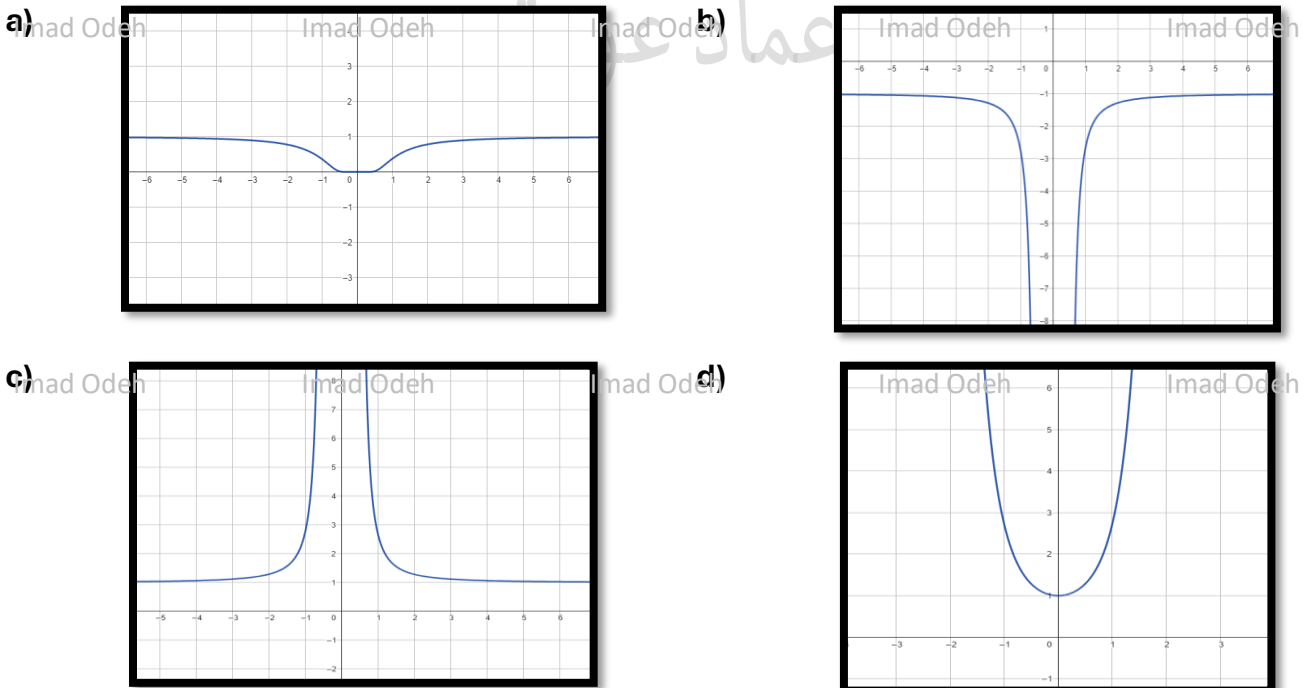
Q12 Determine the graph of the function

$$f(x) = e^{\frac{1}{x}}$$



Q13 Determine the graph of the function

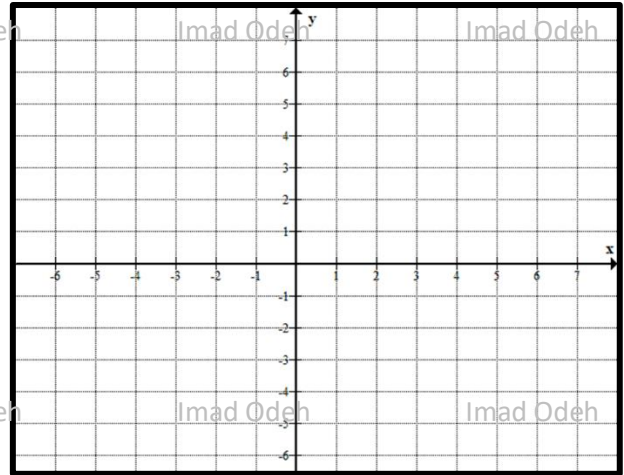
$$f(x) = e^{\frac{1}{x^2}}$$



Q14 Draw a graph of showing all significant features.

س14

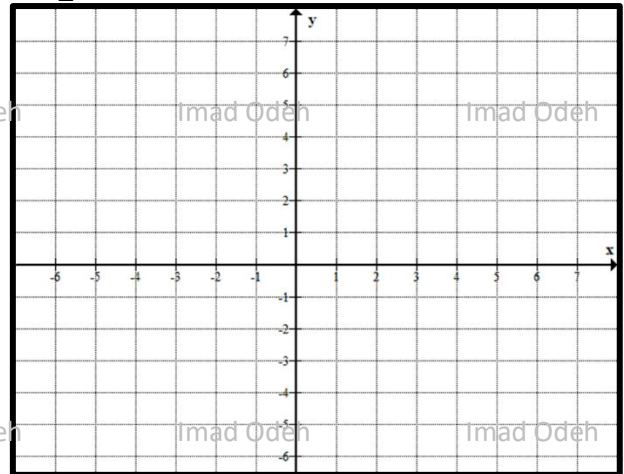
$$f(x) = x^3 - 3x^2 + 3x$$



Q15 Draw a graph of showing all significant features.

س15

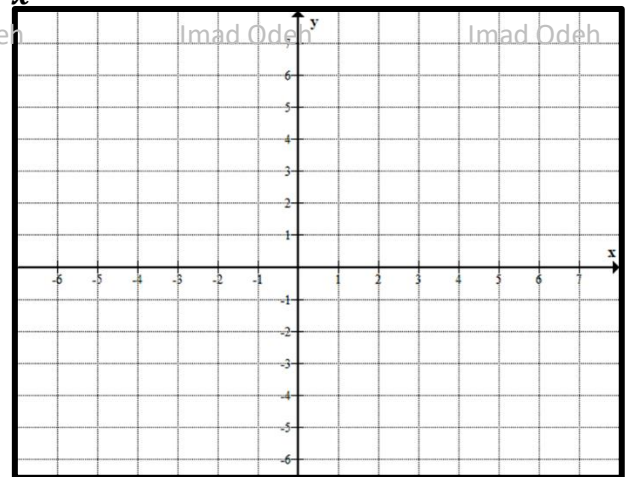
$$f(x) = \frac{3x}{x^2 - 1}$$



Q16 Draw a graph of showing all significant features.

س16

$$f(x) = \frac{x-4}{x^3}$$



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