تم تحميل هذا الملف من موقع المناهج الإماراتية

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موقع المناهج الإماراتية

الملف مذكرة نموذج تدريبي امتحاني
موقع المناهج ⇦ المناهج الإماراتية ⇦ الصف الثاني عشر المتقدم ⇦ رياضيات ⇦ الفصل الثاني

روابط مواقع التواصل الاجتماعي بحسب الصف الثاني عشر المتقدم			
			
روابط مواد الصف الثاني عشر المتقدم على تلغرام			
التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات

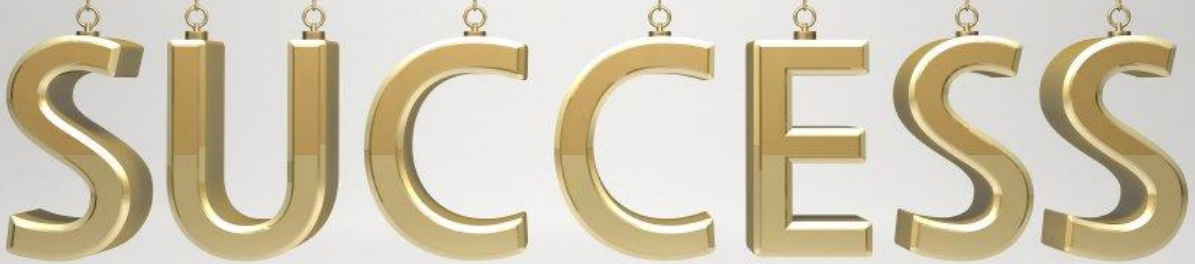
المزيد من الملفات بحسب الصف الثاني عشر المتقدم والمادة رياضيات في الفصل الثاني	
1	كل مايخص الاختبار التكويني لمادة الرياضيات للصف الثاني عشر يوم الأحد 9/2/2020
2	تدريبات متنوعة مع الشرح على الوحدة الرابعة(النهايات والاتصال)
3	تدريبات متنوعة على تطبيقات الاشتقاق
4	قوانين هندسية
5	الاختبار القياسي في الرياضيات

REVISION 9 TERM 2

12 ADVANCED

MATH 2021-2022

9



خطوة واحدة للتفوق

انتظروا المزيد

من سلسة المراجعات النهائية

تم تصميم المراجعة طبقا لهيكل الاختبارات والمتسجدات

التدريب الجيد يضمن لك التفوق

MR – AHMED ATA

Find the linear approximation to f (x) at x = x_0.

Use the linear approximation to estimate the given number

$$f(x) = \sqrt{x} \; at \; x_0 = 1 \; then \; evaluat \; \sqrt{1.2}$$

a) $l(x) = 1 + x$ and $l(1.2) = 1.1$

b) $l(x) = 2 + \frac{1}{2}x$ and $l(1.2) = 1.1$

c) $l(x) = \frac{1}{2} + \frac{1}{2}x$ and $l(1.2) = 1.1$

d) $l(x) = \frac{1}{2} + x$ and $l(1.2) = 1.2$

Find the linear approximation to f (x) at x = x_0.

Use the linear approximation to estimate the given number

$$f\ (x) = (x+1)^{\frac{1}{3}}\ at\ x_0 = 0\ then\ evaluat\ \sqrt[3]{1.2}$$

$a)\ l(x) = 1 + x \quad and\ l(0.2) = 1.0667$

$b)\ l(x) = 1 + \frac{1}{3}x \quad and\ l(0.2) = 1.0667$

$c)\ l(x) = 1 + \frac{2}{3}x \quad and\ l(0.2) = 1.0667$

$d)\ l(x) = \frac{1}{3}x \quad and\ l(0.2) = 1.0667$

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Use the linear approximation to estimate $\sqrt{8.8}$ $such\ that\ f\ (x) = \sqrt{2x+9}\ at\ x_0 = 0$

$a)\ l(x) = \frac{1}{3} + 3x \quad and \quad l(-0.1) = 2.967$

$b)\ l(x) = 3 + \frac{1}{3}x \quad and \quad l(-0.1) = 2.967$

$c)\ l(x) = 3 - \frac{1}{3}x \quad and \quad l(-0.1) = 2.967$

$d)\ l(x) = 3 + \frac{1}{3}x \quad and \quad l(0.1) = 2.967$

Find the linear approximation to f (x) at x = x_0.

Use the linear approximation to estimate the given number

$$f(x) = \frac{2}{x} \text{ at } x_0 = 1 \text{ then evaluat } \frac{2}{0.99}$$

a) $l(x) = 4 - 2x$ and $l(0.99) = 2.02$

b) $l(x) = 4 + 2x$ and $l(0.99) = 2.02$

c) $l(x) = 2 - 2x$ and $l(0.99) = 2.02$

d) $l(x) = 2 - 4x$ and $l(0.99) = 2.02$

Find the linear approximation to f (x) at x = x_0.

Use the linear approximation to estimate the given number

$$f\ (x) = sin3x\ at\ x_0 = 0\ \ then\ evaluat\ sin(0.3)$$

$a)\ \ l(x) = 3x \qquad and\ l(0.3) = 0.3$

$b)\ \ l(x) = x \qquad and\ l(0.1) = 0.3$

$c)\ \ l(x) = x \qquad and\ l(0.1) = 0.3$

$d)\ \ l(x) = 3x \qquad and\ l(0.1) = 0.3$

Find the linear approximation to f (x) at x = x_0.

Use the linear approximation to estimate the given number

$$f\ (x) = sinx\ at\ x_0 = \pi\ \ then\ evaluat\ sin(3)$$

$a)\ \ l(x) = \pi - x \qquad and\ l(3) = 0.14112$

$b)\ \ l(x) = \pi - x \qquad and\ l(3) = 0.14159$

$c)\ l(x) = -\pi - x \qquad and\ l(3) = 0.14159$

$d)\ \ l(x) = \pi + x \qquad and\ l(3) = 0.14159$

Find the indicated limits $\lim_{x \to -2} \frac{x+2}{x^2-4}$

a) $\frac{1}{4}$

b) $-\frac{1}{4}$

c) 4

d) 1

Find the indicated limits $\lim_{x \to 2} \frac{x^2 - 4}{x^2 - 3x + 2}$

a) $\frac{1}{4}$

b) $-\frac{1}{4}$

c) 4

d) 1

Find the indicated limits $\lim_{x\to\infty} \frac{3x^2+2}{x^2-4}$

a) $\frac{1}{3}$

b) -2

c) -3

d) 3

Find the indicated limits $\lim_{x\to\infty} \dfrac{x+1}{x^2+4x+3}$

a) $\mathbf{0}$

b) ∞

c) $\mathbf{1}$

d) $\mathbf{\frac{1}{3}}$

Find the indicated limits $\lim_{t\to 0}\frac{e^{2t}-1}{t}$

a) -1

b) ∞

c) 1

d) 2

Find the indicated limits $\lim_{t\to 0} \frac{sint}{e^{3t}-1}$

a) $\mathbf{1}$

b) $\frac{\mathbf{1}}{\mathbf{3}}$

c) $\mathbf{3}$

d) $\mathbf{0}$

Find the indicated limits $\lim_{x\to\infty} \frac{lnx}{x^2}$

$a)$ 1

$b)$ $\frac{1}{3}$

$c)$ 3

$d)$ 0

Find the indicated limits $\lim_{x\to\infty} \frac{lnx}{\sqrt{x}}$

$a)\ 0$

$b)\ \frac{1}{2}$

$c)\ 1$

$d)\ e$

Find the indicated limits $\lim_{t\to 1} \frac{ln(lnt)}{lnt}$

***a*) 0**

b*) *e

***c*) 1**

d*) *undefiend

Find the indicated limits $\lim_{x \to 0^+} \frac{ln(x)}{cot(x)}$

***a*) 0**

b*) *e

***c*) 1**

***d*) ∞**

Find the indicated limits $\lim_{x \to 0^+} \frac{\sqrt{x}}{ln(x)}$

a) $-\infty$

b) ∞

c) $\mathbf{0}$

d) $\mathbf{1}$

Find the absolute extrema of the given function on each indicated interval.

$$f(x) = x^3 - 3x + 1 \qquad on\ [0,2]$$

a*)** $(1,-1)$ ***Abs mini , $(2,3)$ ***Abs maxi***

b*)** $(1,-1)$ ***Abs maxi , $(2,3)$ ***Abs mini***

c*)** $(-3,-17)$ ***Abs mini , $(-1,3)$ ***and*** $(2,3)$ ***Abs maxi***

d*)** $(-3,-17)$ ***Abs mini , $(2,3)$ ***Abs maxi***

Find the absolute extrema of the given function on each indicated interval.

$$f(x) = x^3 - 3x + 1 \qquad on\ [-3, 2]$$

a*)** $(1,-1)$ ***Abs mini , $(2,3)$ ***Abs maxi***

b*)** $(1,-1)$ ***Abs maxi , $(2,3)$ ***Abs mini***

c*)** $(-3,-17)$ ***Abs mini , $(-1,3)$ ***and*** $(2,3)$ ***Abs maxi***

d*)** $(-3,-17)$ ***Abs mini , $(2,3)$ ***Abs maxi***

Find the absolute extrema of the given function on each indicated interval.

$$f(x) = x^4 - 8x^2 + 2 \qquad on\ [-3, 1]$$

a*)** $(0, 2)$ ***Abs mini , $(-3, 11)$ ***Abs maxi***

b*)** $(-2, -14)$ ***Abs mini , $(-3, 11)$ ***Abs maxi***

c*)** $(0, 2)$ ***Abs mini , $(3, 11)$ ***Abs maxi***

d*)** $(-2, -14)$ ***Abs mini , $(3, 11)$ ***Abs maxi***

Find the absolute extrema of the given function on each indicated interval.

$$f(x) = x^4 - 8x^2 + 2 \qquad on\ [-1, 3]$$

a*)** $(0, 2)$ ***Abs mini , $(-3, 11)$ ***Abs maxi***

b*)** $(-2, -14)$ ***Abs mini , $(-3, 11)$ ***Abs maxi***

c*)** $(0, 2)$ ***Abs mini , $(3, 11)$ ***Abs maxi***

d*)** $(-2, -14)$ ***Abs mini , $(3, 11)$ ***Abs maxi***

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Find the intervals where the function is increasing and decreasing. Use this information to determine all local extrema

$$y = x^3 - 3x + 2$$

a) $\boldsymbol{Increasing\ on\ (-\infty,-1)\cup(1,\infty), Decreasing\ on\ (-1,1)\ , x=-1\ local\ maxi\ , x=1\ local\ mini}$

b) $\boldsymbol{Increasing\ on\ (-\infty,-1)\cup(1,\infty), Decreasing\ on\ (-1,1)\ , x=1\ local\ maxi\ , x=-1\ local\ mini}$

c) $\boldsymbol{Decreasing\ on\ (-\infty,-1)\cup(1,\infty), Increasing\ on\ (-1,1)\ , x=-1\ local\ maxi\ , x=1\ local\ mini}$

d) $\boldsymbol{Increasing\ on\ (-\infty,-1)\cup(-1,1), Decreasing\ on\ (1,\infty)\ , x=-1\ local\ maxi\ , x=1\ local\ mini}$

Find the intervals where the function is increasing and decreasing. Use this information to determine all local extrema

$$y = x^3 + 2x^2 + 1$$

a) $Increasing\ on\ (-\infty, 0) \cup \left(\frac{4}{3}, \infty\right), Decreasing\ on\ \left(0, \frac{4}{3}\right)\ , x = \frac{4}{3}\ local\ maxi\ , x = 0\ local\ mini$

b) $Decreasing\ on\ \left(-\infty, -\frac{4}{3}\right) \cup (0, \infty), Increasing\ on\ \left(-\frac{4}{3}, 0\right)\ , x = \frac{4}{3}\ local\ maxi\ , x = 0\ local\ mini$

c) $Increasing\ on\ \left(-\infty, -\frac{4}{3}\right) \cup (0, \infty), Decreasing\ on\ \left(-\frac{4}{3}, 0\right)\ , x = -\frac{4}{3}\ local\ maxi\ , x = 0\ local\ mini$

d) $Decreasing\ on\ \left(-\infty, -\frac{4}{3}\right) \cup (0, \infty), Increasing\ on\ \left(-\frac{4}{3}, 0\right)\ , x = -\frac{4}{3}\ local\ maxi\ , x = 0\ local\ mini$

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Find the intervals where the function is increasing and decreasing

$$y = x^4 - 8x^2 + 1$$

a) $Decreasing\ on\ (-2,0) \cup (2,\infty), Increasing\ on\ (-\infty,-2) \cup (0,2)$

b) $Increasing\ on\ (-2,0) \cup (2,\infty), Decreasing\ on\ (-\infty,-2) \cup (0,2)$

c) $Increasing\ on\ (-2,0) \cup (0,2), Decreasing\ on\ (-\infty,-2) \cup (2,\infty)$

d) $Decreasing\ on\ (-2,0) \cup (0,2), Increasing\ on\ (-\infty,-2) \cup (2,\infty)$

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Find the intervals where the function is increasing and decreasing

$$y = x^3 - 3x^2 - 9x + 1$$

a) $Increasing\ on\ (-\infty, 0) \cup (3, \infty), Decreasing\ on\ (, 30)$

b) $Decreasing\ on\ (-\infty, -1) \cup (3, \infty), Increasing\ on\ (-1, 3)$

c) $Increasing\ on\ (-\infty, -1) \cup (3, \infty), Decreasing\ on\ (-1, 3)$

d) $Increasing\ on\ (-\infty, -1), Decreasing\ on\ (-1, 3) \cup (3, \infty)$

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Find the intervals where the function is increasing and decreasing Use this information to determine all local extrema

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

a) Decreasing on $(-\infty,-1)$ ***Increasing on*** $(-1,\infty)$, $x=-1$ ***local maxi***

b) Decreasing on $(-\infty,-1)$ ***Increasing on*** $(-1,\infty)$, $x=-1$ ***local mini***

c) increasing on $(-\infty,-1)$ ***decreasing on*** $(-1,\infty)$, $x=-1$ ***local mini***

d) increasing on $(-\infty,-1)$ ***decreasing on*** $(-1,\infty)$, $x=-1$ ***local maxi***

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Find all critical numbers and use the First Derivative Test to classify each as the location of a local maximum, local minimum or neither

$$y = xe^{-2x}$$

$a)$ $Critical\ number\ at\ x = 0.5\ , and\ x = 0.5\ local\ maxi$

$b)$ $Critical\ number\ at\ x = 0.5\ , and\ x = 0.5\ local\ mini$

$c)$ $Critical\ number\ at\ x = -0.5\ , and\ x = -0.5\ local\ maxi$

$d)$ $Critical\ number\ at\ x = -0.5\ , and\ x = -0.5\ local\ mini$

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Find all critical numbers and use the First Derivative Test to classify each as the location of a local maximum, local minimum or neither

$$y = x^2 e^{-x}$$

a) Critical number at $x = 0$, and $x = 0$ local maxi

b) Critical number at $x = 0$, and no exetrema

c) Critical number at $x = 1$, and $x = 1$ local maxi

d) Critical number at $x = 0$, and $x = 0$ local mini

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Find all critical numbers and use the First Derivative Test to classify each as the location of a local maximum, local minimum or neither

$$y = tan^{-1}(x^2)$$

a) Critical number at $x = -1$, and $x = -1$ local maxi

b) Critical number at $x = 0$, and no exetrema

c) Critical number at $x = 1$, and $x = 1$ local maxi

d) Critical number at $x = 0$, and $x = 0$ local mini

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determine the intervals where the graph of the given function is concave up and concave down

$$y = 2x^3 + 9x^2 - 24x - 10$$

$a)\ x > \frac{3}{2}\ cocave\ up\ , x < \frac{3}{2}\ concave\ down$

$b)\ x > -\frac{3}{2}\ cocave\ up\ , x < -\frac{3}{2}\ concave\ down$

$c)\ x > -\frac{3}{2}\ cocave\ down\ , x < -\frac{3}{2}\ concave\ up$

$d)\ x < -\frac{3}{2}\ cocave\ up\ , x > -\frac{3}{2}\ concave\ down$