MKCL OES

Question No. 10

For $r \neq 0$, evaluate $\lim_{x \to r} \frac{x-4}{x} =$

- $\frac{4}{r}$
- $1-\frac{4}{r}$
- $r-4$
- $1-\frac{r}{4}$

* بالتعويض:

$$\frac{r-4}{r} = \frac{r}{r} - \frac{4}{r} = \boxed{1-\frac{4}{r}}$$

$\downarrow$

$\boxed{B}$

Save & Next حفظ والتالي

MKCL OES

Question No. 13

Evaluate $\lim_{x \to \infty} \frac{x^4+2x^2-1}{x^3-2x-2} =$

- $-\infty$
- ∞
- 1
- 0

درجة البسط اكبر من درجة المقام = $\pm\infty$

B ← لانها تقترب من $+\infty$

Save & Next

Question No. 14

Evaluate $\lim_{x \to \infty} \frac{100}{x^2 - 5} =$

- -20
- -5
- 0
- -1

درجة المقام اكبر من درجة البسط = 0

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MKCL OES

Online Evaluation System

Question No. 15

Evaluate $\lim\limits_{x\to-\infty} \dfrac{\sqrt{x^2-16}}{8-2x} =$

- $\frac{1}{4}$
- $\frac{-1}{2}$
- 5
- $\frac{1}{2}$

درجة البسط تساوي ، درجة المقام = قسمة المعاملات

$\sqrt{x^2-16} = \sqrt{(x-4)^2} = \boxed{x-4}$

$\dfrac{x-4}{8-2x} = \boxed{\dfrac{1}{-2}} \rightarrow \boxed{B}$

Save & Next

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Online Evaluation System

Question No. 16

if $f(x)=\begin{cases}\dfrac{x^2-4}{x-4} & \text{if} \quad x\neq 2\\ 5 & \text{if} \quad x=2\end{cases}$ then $\lim\limits_{x\to 2} f(x)$ is

- 2
- 4
- 0
- -2

$$\frac{(x-2)(x+2)}{x-4} = \frac{0}{-2} = \boxed{0}$$

$\downarrow$

$\boxed{C}$

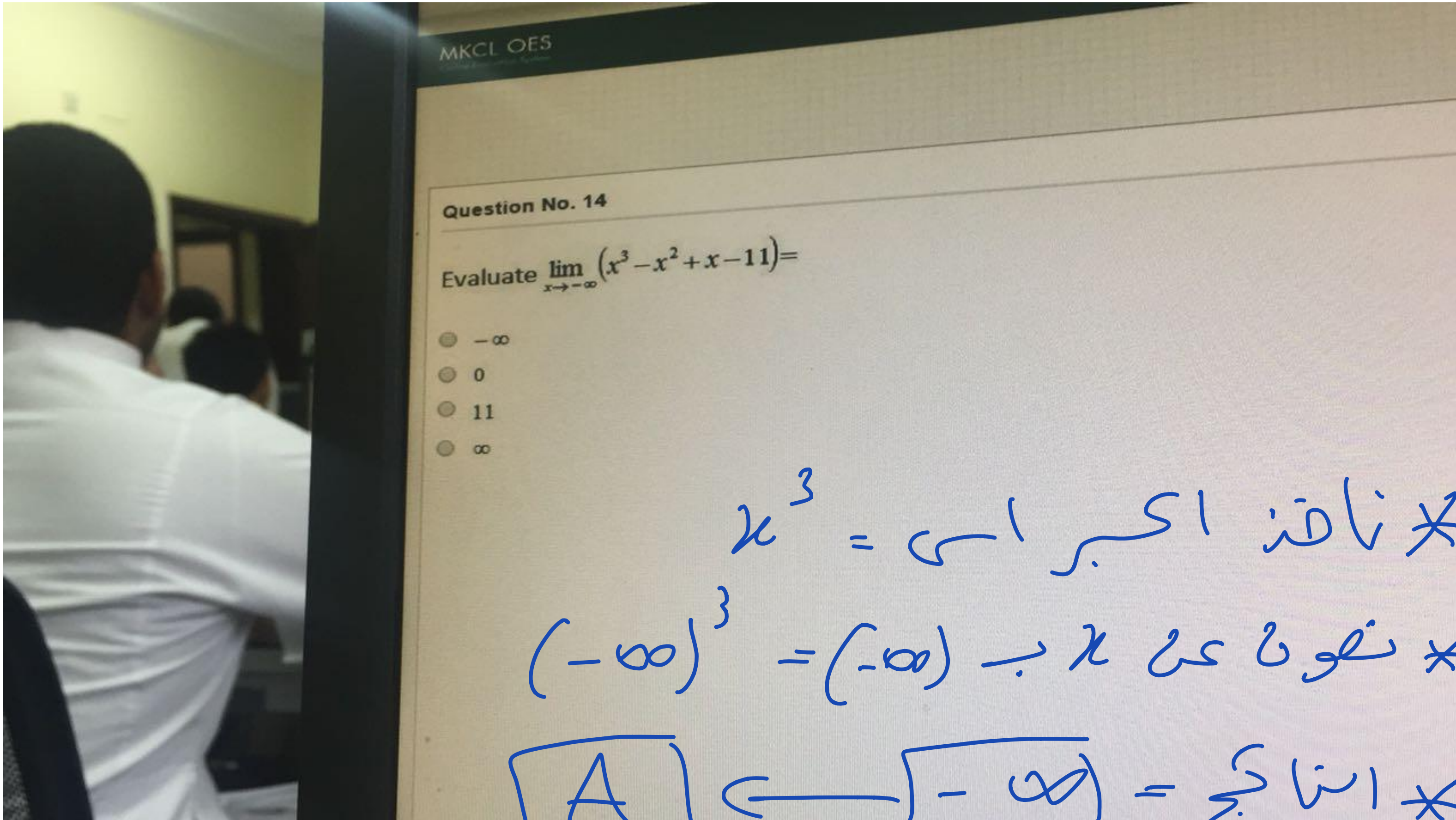
Save & Next حفظ والتالي

Question No. 13

Evaluate $\lim_{x \to -\infty} \dfrac{7x^2 + x - 100}{2x^2 - 5x} =$

- $\frac{2}{5}$
- $\frac{7}{2}$
- $\frac{7}{5}$
- $\frac{1}{2}$

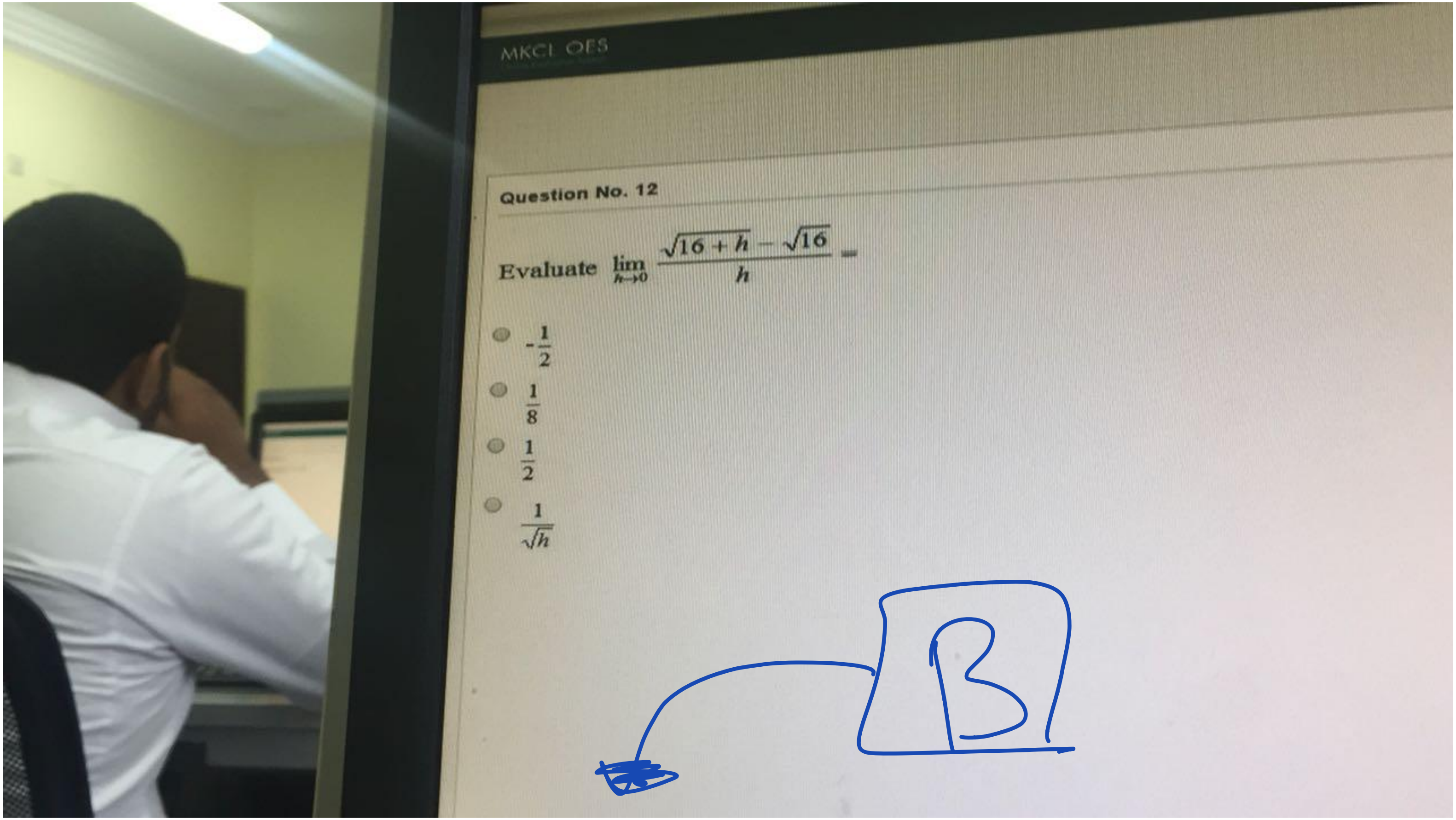
B



* ناخذ اكبر اس = x^3

* نعوض عن x ب $(-\infty)$ = $(-\infty)^3$

* الناتج = $-\infty$ ⟵ A


MKCL OES
Question No. 12
Evaluate $\lim_{h \to 0} \frac{\sqrt{16+h} - \sqrt{16}}{h} =$
$-\frac{1}{2}$
$\frac{1}{8}$
$\frac{1}{2}$
$\frac{1}{\sqrt{h}}$
B

* نضرب البسط والمقام في المرافق:

$$= \frac{\left(\sqrt{16+h} - \sqrt{16}\right)\left(\sqrt{16+h} + \sqrt{16}\right)}{h\left(\sqrt{16+h} + \sqrt{16}\right)}$$

$$= \frac{\left(\sqrt{16+h}\right)^2 - \left(\sqrt{16}\right)^2}{h\left(\sqrt{16+h} + \sqrt{16}\right)}$$

$$= \frac{16 + h - 16}{h\left(\sqrt{16+h} + \sqrt{16}\right)} = \frac{h}{h\left(\sqrt{16+h} + \sqrt{16}\right)}$$

$$= \frac{1}{\sqrt{16+h} + \sqrt{16}}$$

* نعوض عن h بالصفر:

$$= \frac{1}{\sqrt{16+0} + \sqrt{16}} = \boxed{\frac{1}{8}}$$

Question No. 40

The condition for continuity of $\lim_{x \to c} f(x)$ at a point c of its domain is

- $\lim_{x \to c} f(x) = f(x)$
- $\lim_{x \to c} f(x) = x$
- $\lim_{x \to c} f(x) = f(c)$
- $\lim_{x \to c} f(x) = c$

No. 14

Evaluate $\lim_{x\to\infty} \dfrac{x^3+x^2+x+1}{x^3+3x^2+5x+2} =$

- 2
- 4
- 3
- 1

D

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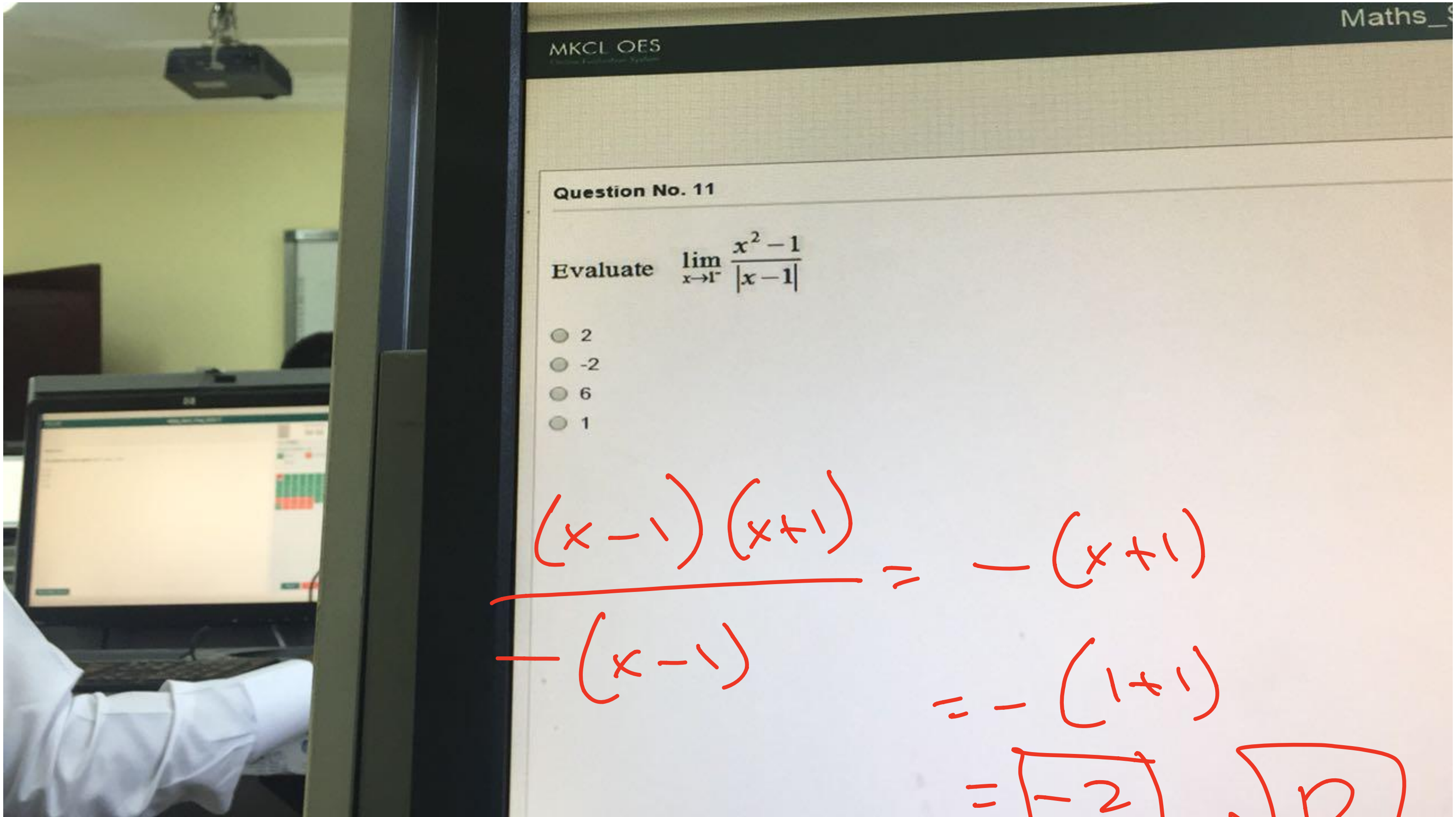
mpaq LE1711



$$\frac{(x-1)(x+1)}{-(x-1)} = -(x+1)$$

$$= -(1+1)$$

$$= \boxed{-2} \rightarrow \boxed{B}$$

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Online Evaluation System

Question No. 12

Evaluate $\lim_{x \to -2} \frac{2+x}{2x(x^3+8)} =$

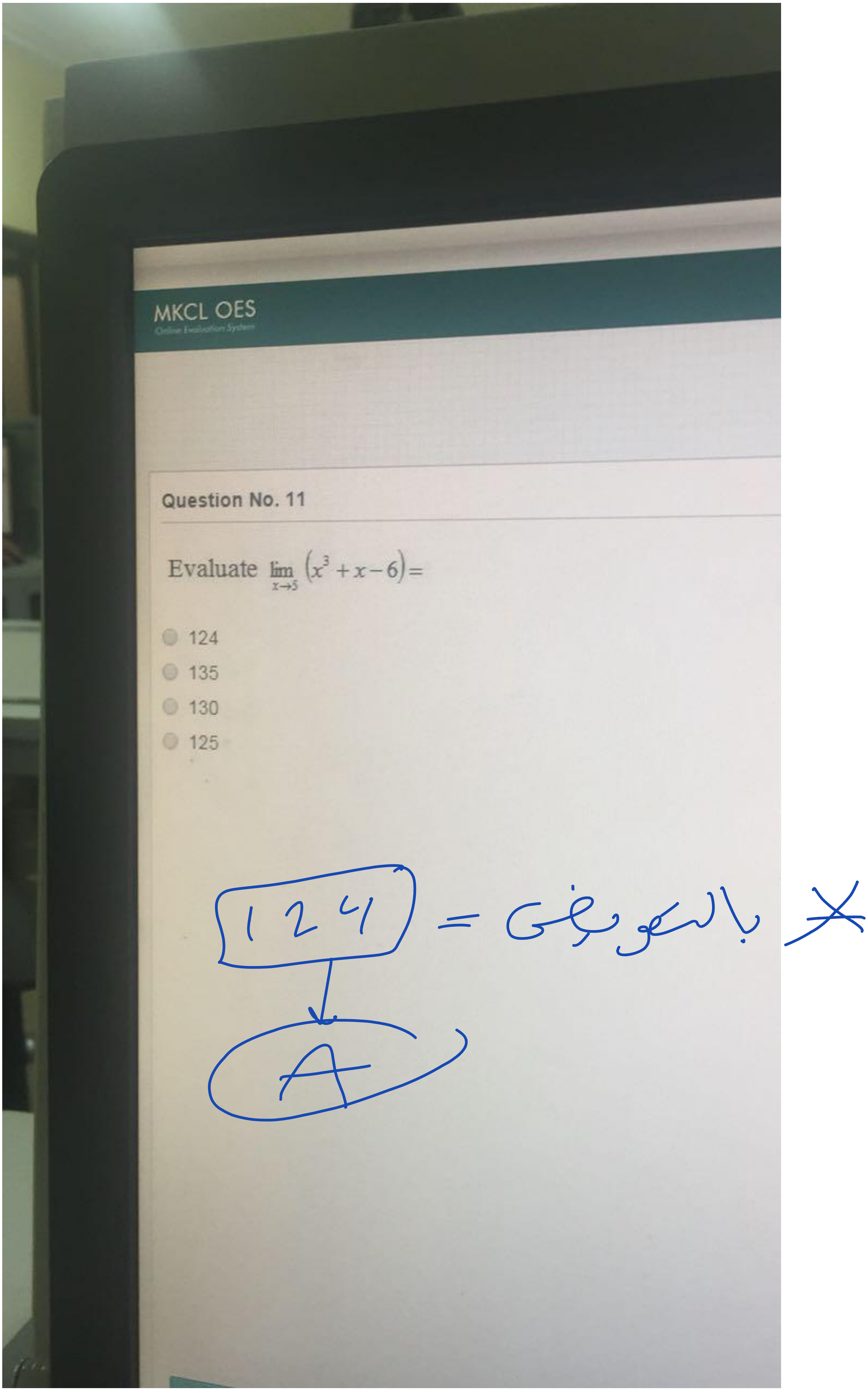
- 0
- -28
- $\frac{1}{8}$
- $\frac{-1}{48}$

$$\frac{2+x}{2x\left[(x+2)(x^2-2x+4)\right]} = \frac{1}{2x(x^2-2x+4)}$$

$$= \frac{1}{2(-2)\left((-2)^2-2(-2)+4\right)} = \frac{1}{-48}$$

D

Save & Next حفظ والتالي


MKCL OES
Online Evaluation System
Question No. 11
Evaluate $\lim_{x\to 5}\left(x^3+x-6\right)=$
124
135
130
125
124 = بالتعويض
A

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Online Evaluation System

Question No. 13

Evaluate $\lim\limits_{x\to-\infty}\frac{x+7}{3x+5}=$

- 0
- $\frac{7}{5}$
- $\frac{1}{3}$
- $\frac{5}{7}$

https://drive.google.com/drive/...

Microsoft PowerPoint - section

Question 6

Evaluate the indicated limit $\lim_{x \to 5^-} \frac{1}{5-x}$

A. ∞

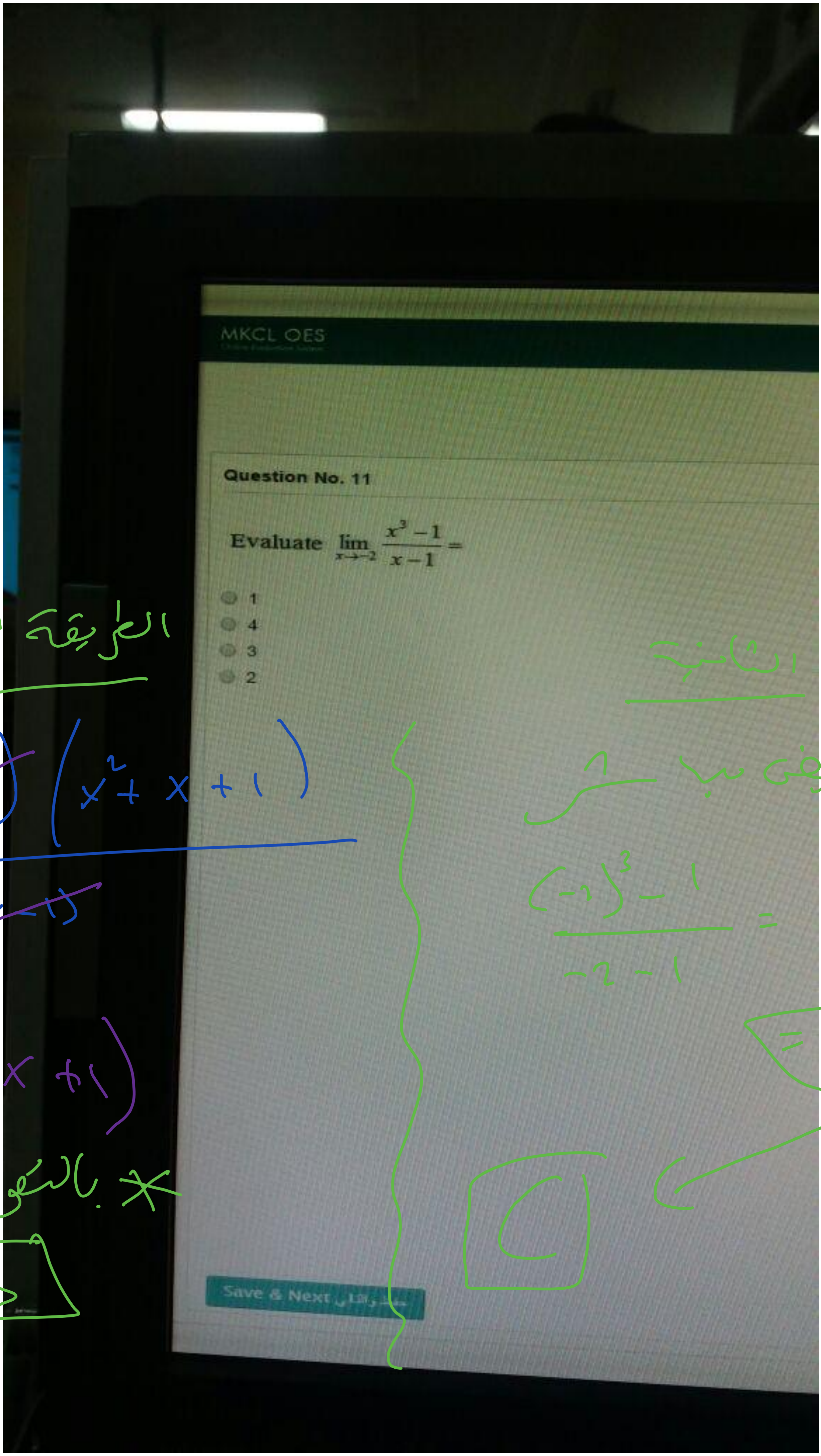
B. 0

C. $-\infty$

D. $\frac{1}{5}$

A

انقر لإضافه ملاحظات



الطريقة الأولى

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

(x^2+x+1)

بالتعويض

$= 3$

الثانية

تعويض بـ -2

$$\frac{(-1)^3-1}{-2-1} = \frac{-9}{-3}$$

$= 3$

MKCL OES

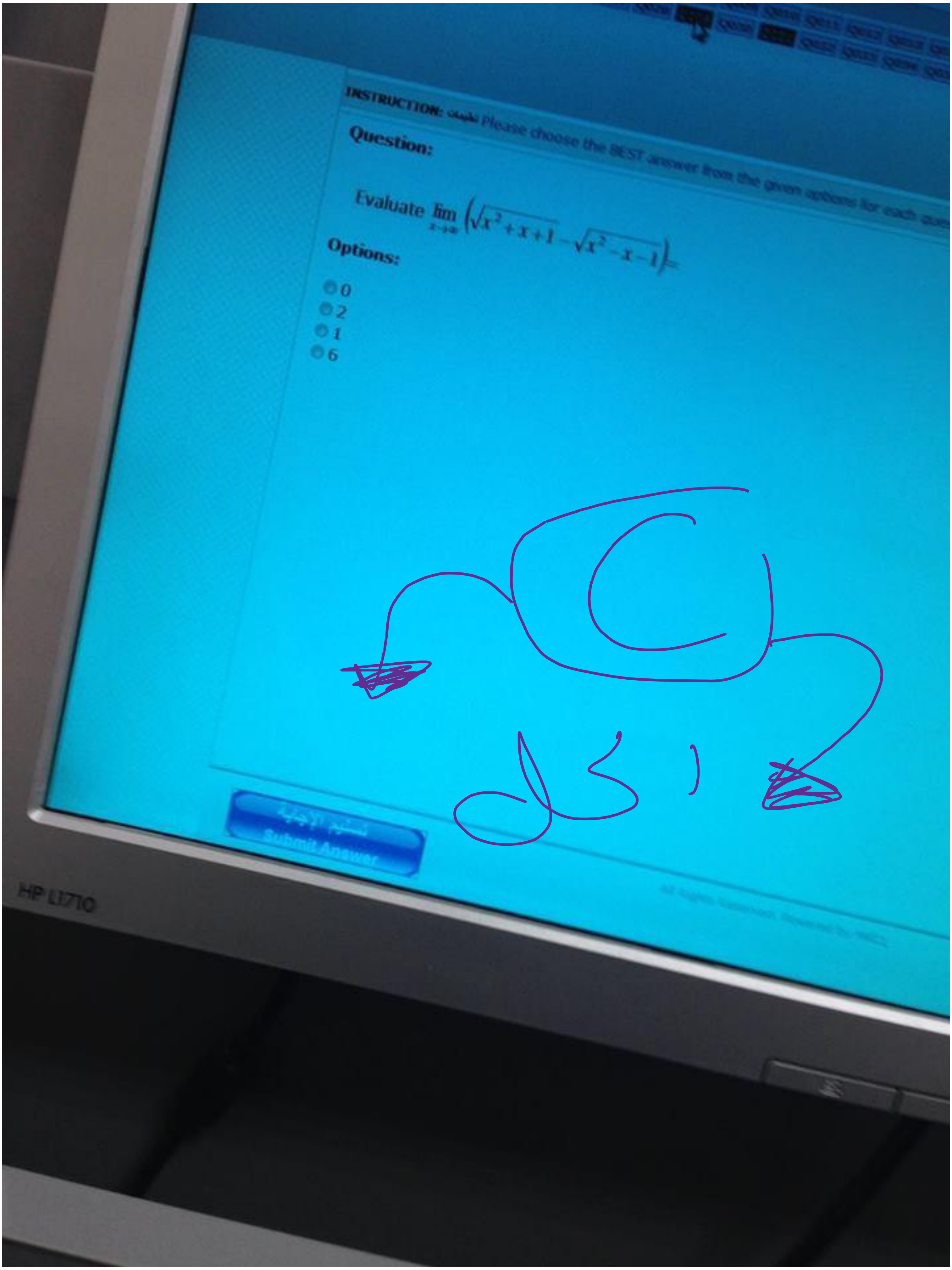
Question No. 13

Evaluate $\lim_{x\to\infty} \frac{x^4+2x^2-1}{x^3-2x-2} =$

- $-\infty$
- ∞
- 1
- 0

B

Save & Next حفظ والتالي


INSTRUCTION: تعليمات Please choose the BEST answer from the given options for each que
Question:
Evaluate $\lim_{x\to\infty}\left(\sqrt{x^2+x+1}-\sqrt{x^2-x-1}\right)=$
Options:
0
2
1
6
تسليم الإجابة
Submit Answer
HP L1710

* نضرب في المرافق =

$$\frac{\left(\sqrt{x^2+x+1}-\sqrt{x^2-x-1}\right)\left(\sqrt{x^2+x+1}+\sqrt{x^2-x-1}\right)}{\sqrt{x^2+x+1}+\sqrt{x^2-x-1}}$$

$$\frac{\left(\sqrt{x^2+x+1}\right)^2-\left(\sqrt{x^2-x-1}\right)^2}{\sqrt{x^2+x+1}+\sqrt{x^2-x-1}} = \frac{(x^2+x+1)-(x^2-x-1)}{\sqrt{x^2+x+1}+\sqrt{x^2-x-1}}$$

$$= \frac{2x+2}{\sqrt{x^2+x+1}+\sqrt{x^2-x-1}} = \frac{2x+2}{\sqrt{x^2\left(1+\frac{x}{x^2}+\frac{1}{x^2}\right)}+\sqrt{x^2\left(1-\frac{x}{x^2}-\frac{1}{x^2}\right)}}$$

$$= \frac{2x+2}{\sqrt{x^2}\sqrt{1+\frac{x}{x^2}+\frac{1}{x^2}}+\sqrt{x^2}\sqrt{1-\frac{x}{x^2}-\frac{1}{x^2}}}$$

$$= \frac{2x+2}{x\cdot 1+x\cdot 1} = \frac{2x+2}{2x} = \frac{2}{2} = 1$$

درجة البسط = درجة المقام 2

What is the value of the limit $\lim_{x \to 0} \frac{x^2 - x - 2}{x^2 - 2x}$

A. -2

B. Does not exist

C. 1

A. $-\infty$

B

$$\frac{\cancel{(x-2)}(x+1)}{x\cancel{(x-2)}} = \frac{(x+1)}{x}$$

DNE

B

Determine the limit if it exists. $\lim_{x \to 6} \frac{x+6}{(x-6)^2}$

A. -6

B. 0

C. 6

D. Does not exist

D

Find the limit $\lim_{x \to -2} \frac{1}{x+2}$

A. Does not exist

B. $-\infty$

C. $\frac{1}{2}$

D. ∞

A

INSTRUCTION: تعليمات Please choose the BEST answer from the given options for each q

Question:

Evaluate $\lim_{x \to -\infty} \left(x^6 - x^4 + x - 1\right) =$

Options:

- ∞
- 1
- 0
- $-\infty$

A

تسليم الإجابة
Submit Answer

INSTRUCTION: تعليمات Please choose the BEST answer from the given options for e

Question:

Evaluate $\lim_{x \to -3} \dfrac{|x+3|}{x^2+x-6} =$

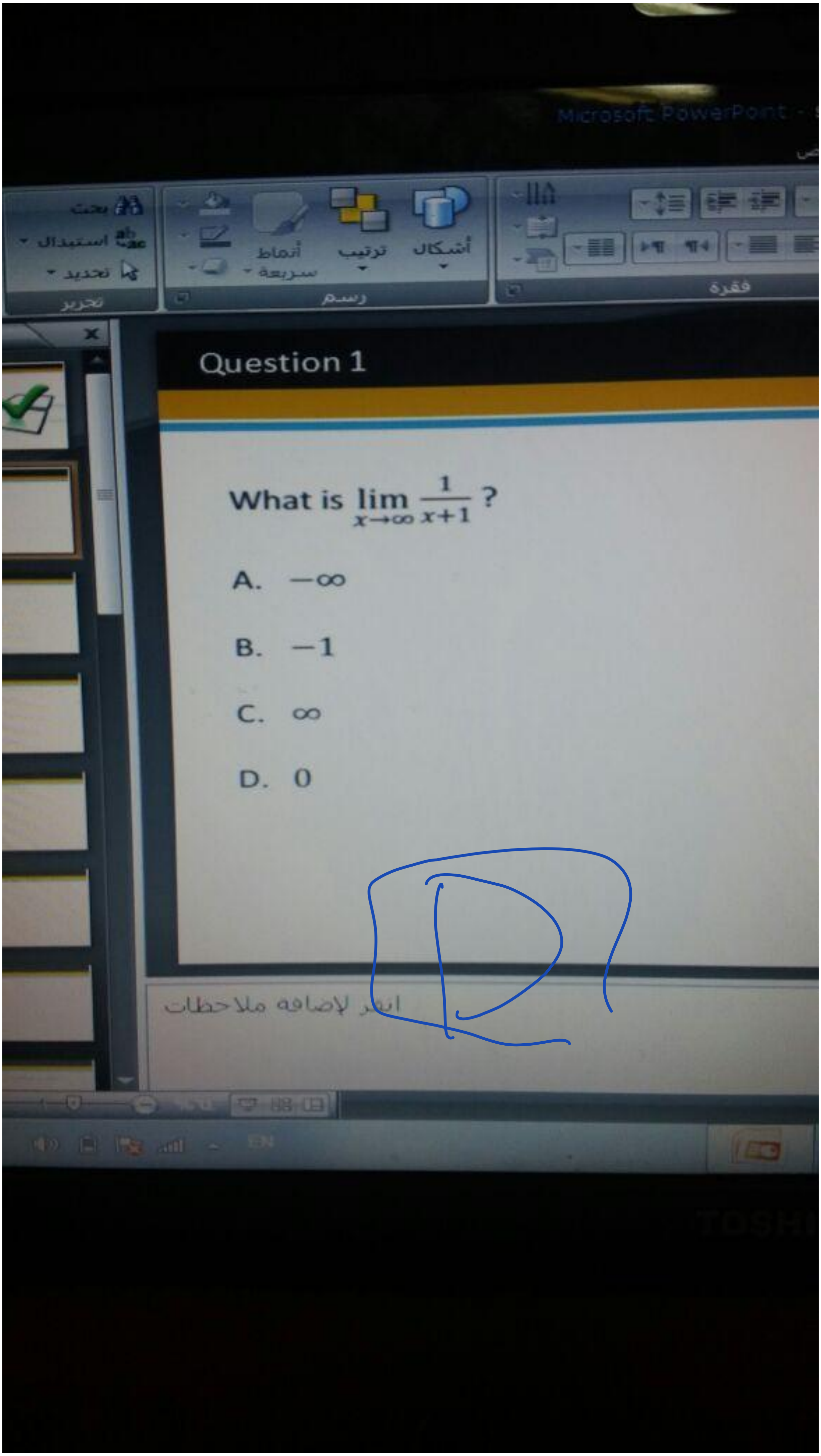
Options:

- $\frac{1}{5}$
- $-\frac{1}{5}$
- 0
- Does not exist

DNE = اي قيمة مطلقة

D

تسليم الإجابة
Submit Answer



Microsoft PowerPoint
بحث
استبدال
تحديد
تحرير
أشكال
ترتيب
أنماط سريعة
رسم
فقرة
Question 1
What is $\lim_{x\to\infty} \frac{1}{x+1}$?
A. $-\infty$
B. -1
C. ∞
D. 0
D
انقر لإضافه ملاحظات

KCL OES

Online Evaluation System

Question No. 40

if $f(x)=\begin{cases} \dfrac{x^2-1}{x-1} & \text{if} \quad x \neq 1 \\ 1 & \text{if} \quad x=1 \end{cases}$ then $\lim\limits_{x \to 1} f(x)$ is

- -2
- 2
- 3
- 1

$$\frac{(x-1)(x+1)}{(x-1)} = (x+1) = \boxed{2}$$