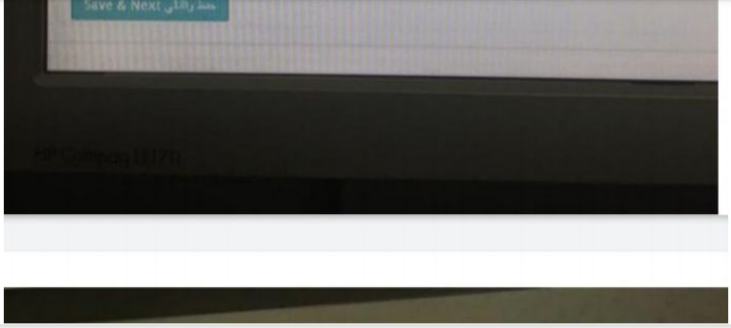
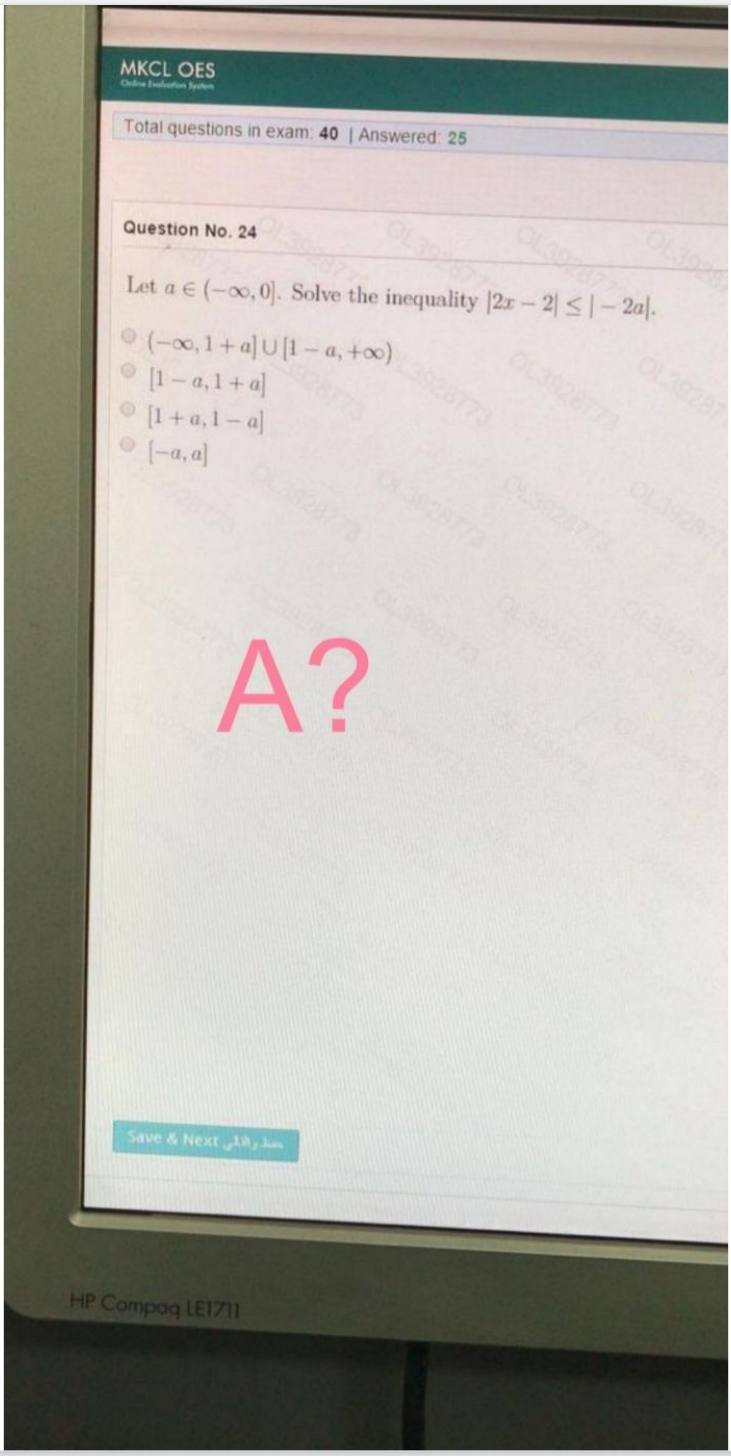
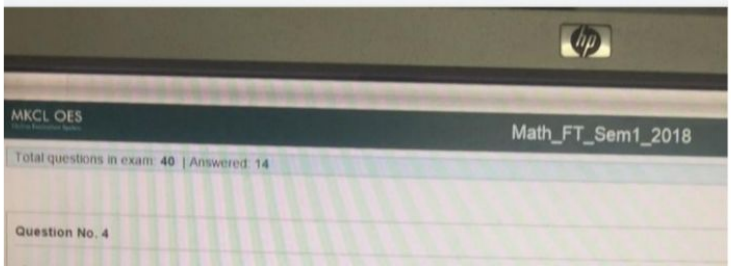



MKCL OES
Total questions in exam: 40 | Answered: 25
Question No. 24
Let $a \in (-\infty, 0]$. Solve the inequality $|2x-2| \leq |-2a|$.
$(-\infty, 1+a] \cup [1-a, +\infty)$
$[1-a, 1+a]$
$[1+a, 1-a]$
$[-a, a]$
A?
Save & Next
HP Compaq LE1711


MKCL OES
Math_FT_Sem1_2018
Total questions in exam: 40 | Answered: 14
Question No. 4

MKCL OES

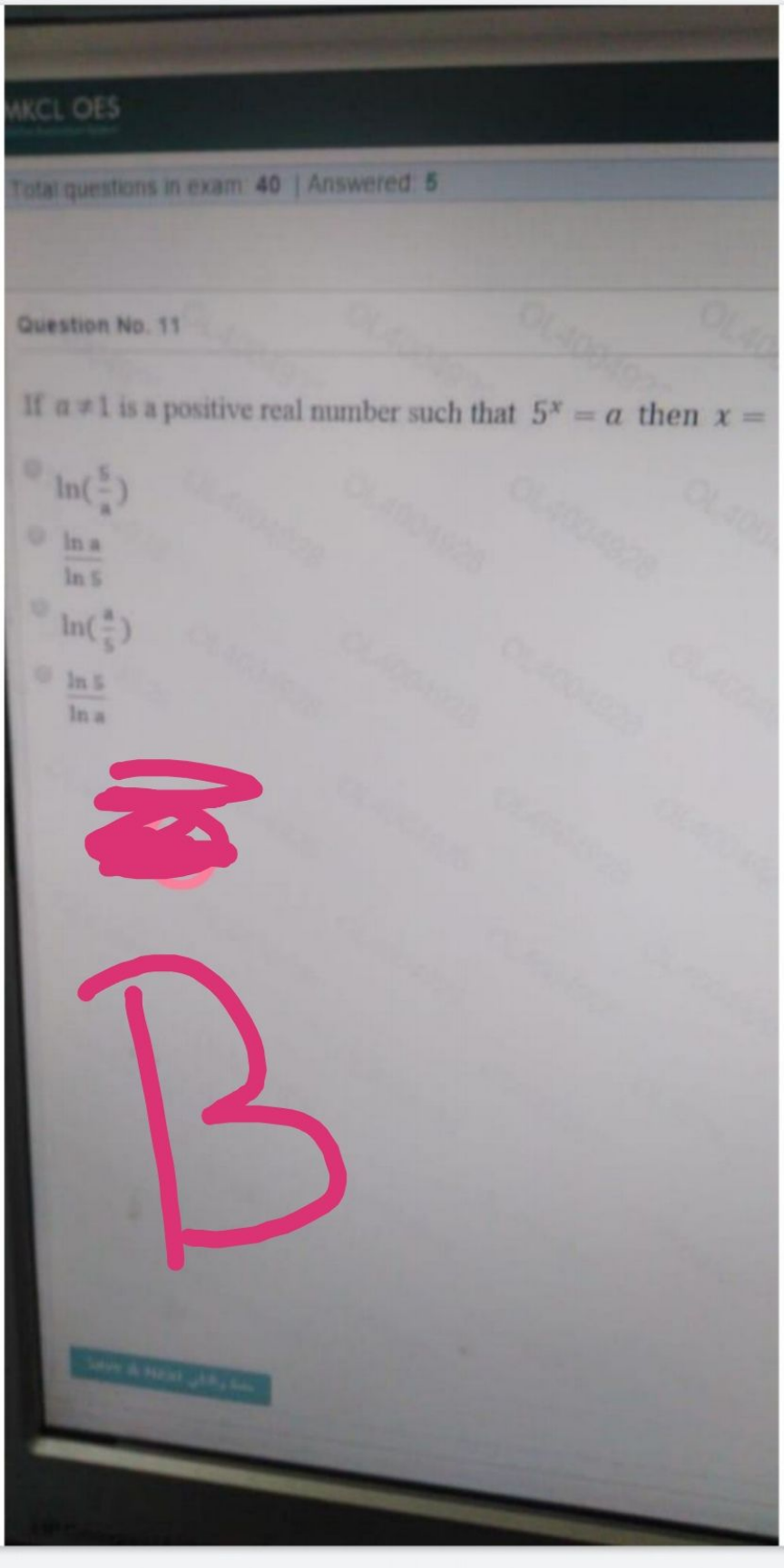
Total questions in exam: 40 | Answered: 12

Question No. 30

The supplement of the angle 20° is:

- 70°
- 80°
- 180°
- 160°

D


MKCL OES
Total questions in exam: 40 | Answered: 5
Question No. 11
If $a \neq 1$ is a positive real number such that $5^x = a$ then $x =$
$\ln(\frac{5}{a})$
$\frac{\ln a}{\ln 5}$
$\ln(\frac{a}{5})$
$\frac{\ln 5}{\ln a}$
B

Question No. 29

Let $f(x) = ax^2 + bx + 1$, find the values of a and b such that $f(x) = f(-x)$, for all $x \in \mathbb{R}$.

- $a = b = 1$.
- $a = -1$ and $b = 1$.
- $a \in \mathbb{R}$ and $b \neq 0$.
- $a \in \mathbb{R}$ and $b = 1$.

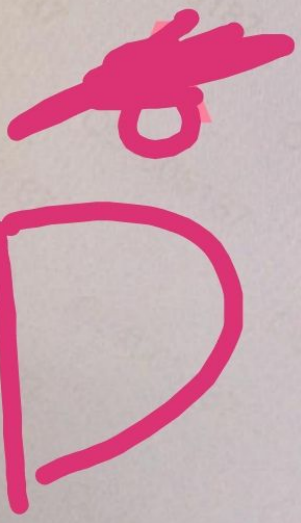
MKCL OES

Total questions in exam: 40 | Answered: 12

Question No. 30

The supplement of the angle 20° is:

- 70°
- 80°
- 180°
- 160°



tal questions in exam: 40 | Answered: 12

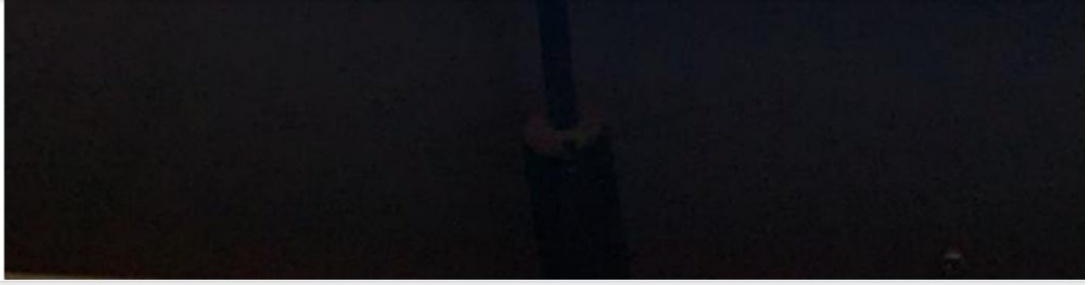
Total questions in exam: 40 | Answered: 31

Question No. 2

Let $a \in \mathbb{R}$. If the solution set of the inequality $|4x-8|+a>0$ is $(-\infty,2)\cup(2,+\infty)$

- a = 1
- a = 0
- a = 2
- a = -1

D



Total questions in exam: 40 | Answered: 0

Question No. 2

The solution of the equation $2^x = 3^{2x-1}$ is

- $\frac{\ln 2}{2\ln 3 - \ln 2}$
- $\frac{\ln 2}{\ln 2 - 2\ln 3}$
- $\frac{\ln 3}{\ln 2 - 2\ln 3}$
- $\frac{\ln 3}{2\ln 3 - \ln 2}$

Save & Next حفظ والتالي

MKCL OES

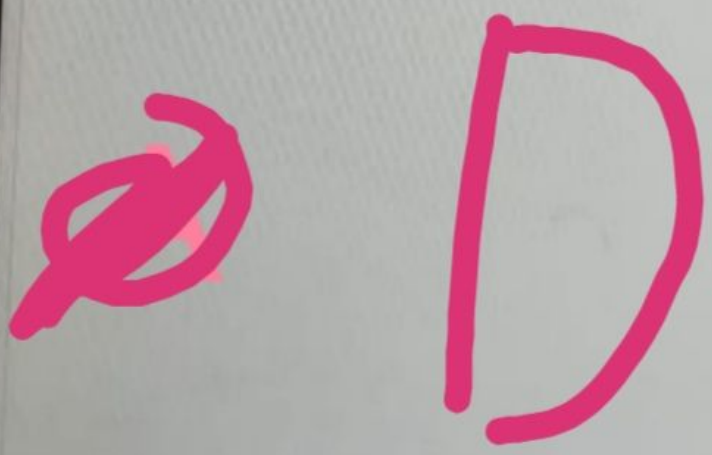
Math_FT_Sem

Total questions in exam: **40** | Answered: 0

Question No. 10

Let $f(x) = x^2 + c$ and $g(x) = x$, give the value of c such that $f(x+1) = xg(x) + 2x$.

- c = 0
- c = 1
- c = 4
- c = -1



Answered: 0

Question No. 14

The range of the function $f(x) = -x^2 + 1$ is

- $(-\infty, 1]$
- $[1, \infty)$
- $[-1, \infty)$
- $(-\infty, -1]$

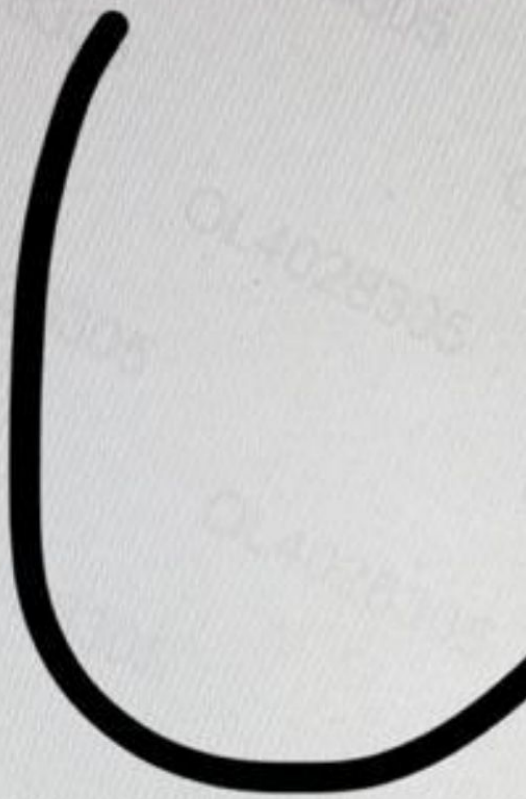
A

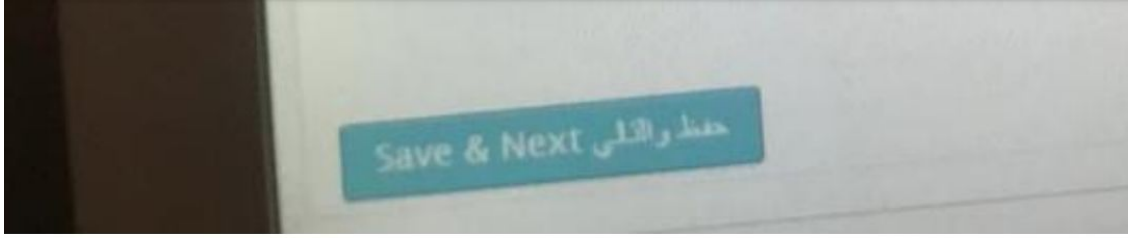
Question No. 15

The graph of $f(x) = -3x^2 + x + 4$ is

- Open left
- Open right
- Open down
- Open up

C

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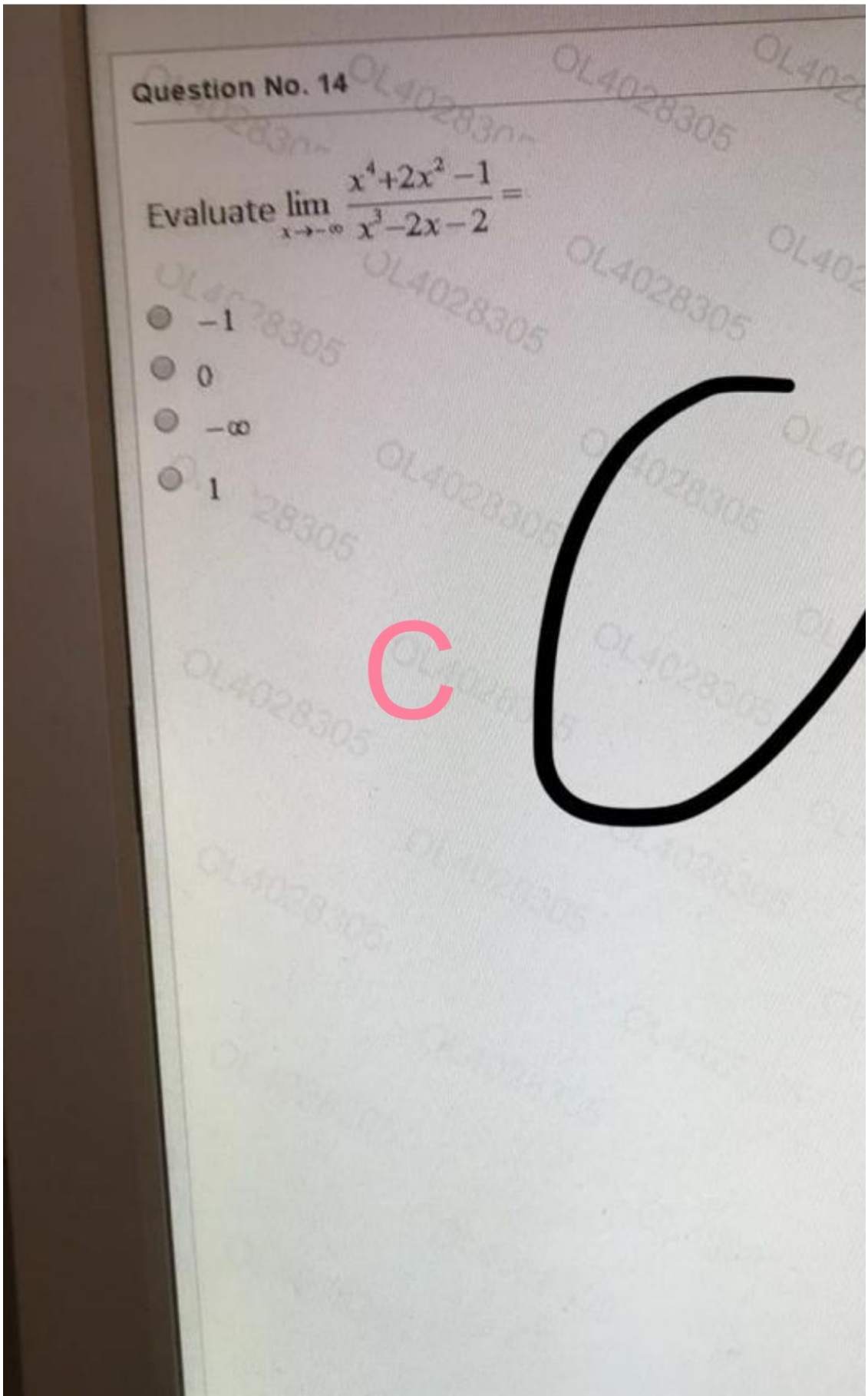

Question No. 14
Evaluate $\lim_{x\to-\infty} \frac{x^4+2x^2-1}{x^3-2x-2} =$
-1
0
$-\infty$
1
C

Question No. 4

The supplement of the angle 45° is:

- 45°
- 60°
- 80°
- 135°

D

MKCL OES
Online Evaluation System

Total questions in exam: **40** | Answered: **19**

Question No. 31

Which of the following functions is one-to-one

- F= { (-3,-3), (0,0), (4,-2), (1,-5) }
- F= { (3,5), (6,0), (3,-2), (1,-5) }
- F= { (4,-3), (1,0), (5,-2), (1,-3) }
- F= { (-3,-2), (0,4), (3,-2), (1,-5) }

A

Save & Next جمع راقلی

Total questions in exam: 40 | Answered: 13

Question No. 35

If a function $f(x)$ has an inverse function and $f(-2) = 11$, then

- $f^{-1}(11) = -1$
- $f^{-1}(-2) = -11$
- $f^{-1}(11) = -2$
- $f^{-1}(2) = -11$

C

Save & Next

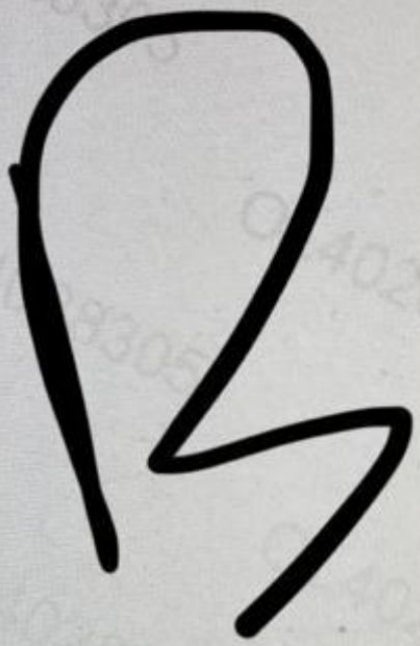
Total questions in exam:

Question No. 16

Evaluate $\lim_{x \to -3} \frac{x^2 + 7x + 12}{x + 3} =$

- 4
- 1
- -3
- 0

B



Total questions in exam: 40 | Answered: 20

Question No. 16

Which of the following functions is one-to-one?

- $f(x)=\sqrt{16-x^2}$
- $f(x)=-2x+5$
- $f(x)=5x^2-1$
- $f(x)=-2x^2+5$

B

٥٨٦ / ٥٤٠

Save & Next حفظ والتالي

Save & Next

MKCL OES

Math_FT

Total questions in exam: 40 | Answered: 40

Question No. 37

Let $a > 1$. The solution set of the equation $\log_x(2x^2 - a^2) = 2$ is

- S = {a, 2a}
- S = {a}
- S = {-a}
- S = {-a, a}

B

Save & Next

HP Compaq LE1711

Online Evaluation System

Total questions in exam: **40** | Answered: **19**

Question No. 13

Let $a, b \in \mathbb{R}$. Give the values of a and b that make this statement true:

$$2b + (3a - \sqrt{2})i = b - 2 + (a + \sqrt{8})i$$

- $a = \frac{3\sqrt{2}}{2}$ and $b = -2$
- $a = -3\sqrt{2}$ and $b = -2$
- $a = 3\sqrt{2}$ and $b = 2$
- $a = -\frac{2\sqrt{2}}{3}$ and $b = -2$

A

Save & Next

HP Compaq LE1711

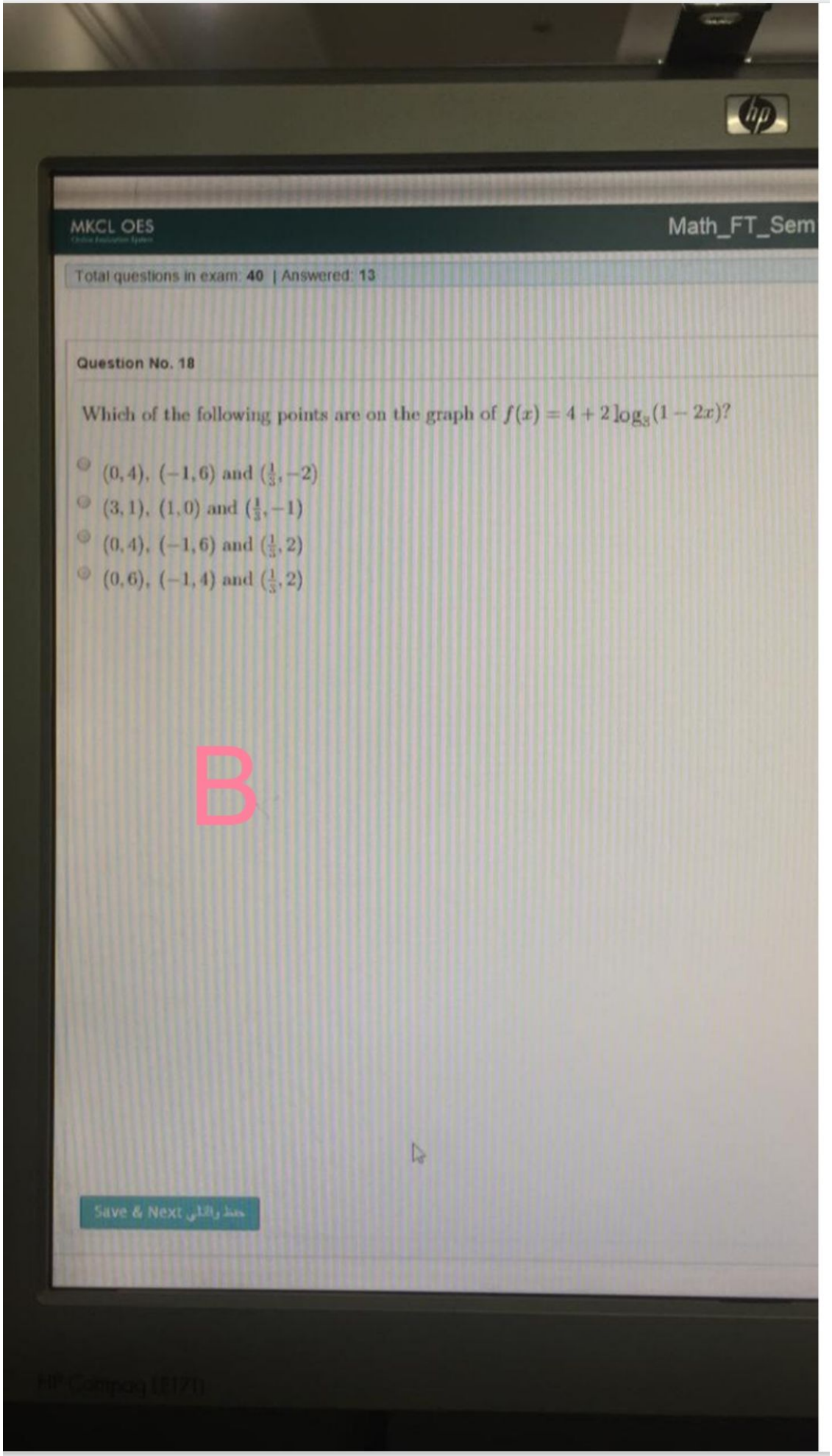
Total questions in exam: **40** | Answered: 1

Question No. 2

If $x \in \mathbb{N}$, then the value of i^{4x-1} is

- -1
- 1
- $-i$
- i

C


MKCL OES
Math_FT_Sem
Total questions in exam: 40 | Answered: 13
Question No. 18
Which of the following points are on the graph of $f(x) = 4 + 2\log_3(1-2x)$?
$(0,4)$, $(-1,6)$ and $(\frac{1}{3},-2)$
$(3,1)$, $(1,0)$ and $(\frac{1}{3},-1)$
$(0,4)$, $(-1,6)$ and $(\frac{1}{3},2)$
$(0,6)$, $(-1,4)$ and $(\frac{1}{3},2)$
B
Save & Next

MKCL OES
Online Evaluation System

Total questions in exam: **40** | Answered: **25**

Question No. 24

Let $a \in (-\infty, 0]$. Solve the inequality $|2x - 2| \leq |-2a|$.

- $(-\infty, 1+a] \cup [1-a, +\infty)$
- $[1-a, 1+a]$
- $[1+a, 1-a]$
- $[-a, a]$

A?

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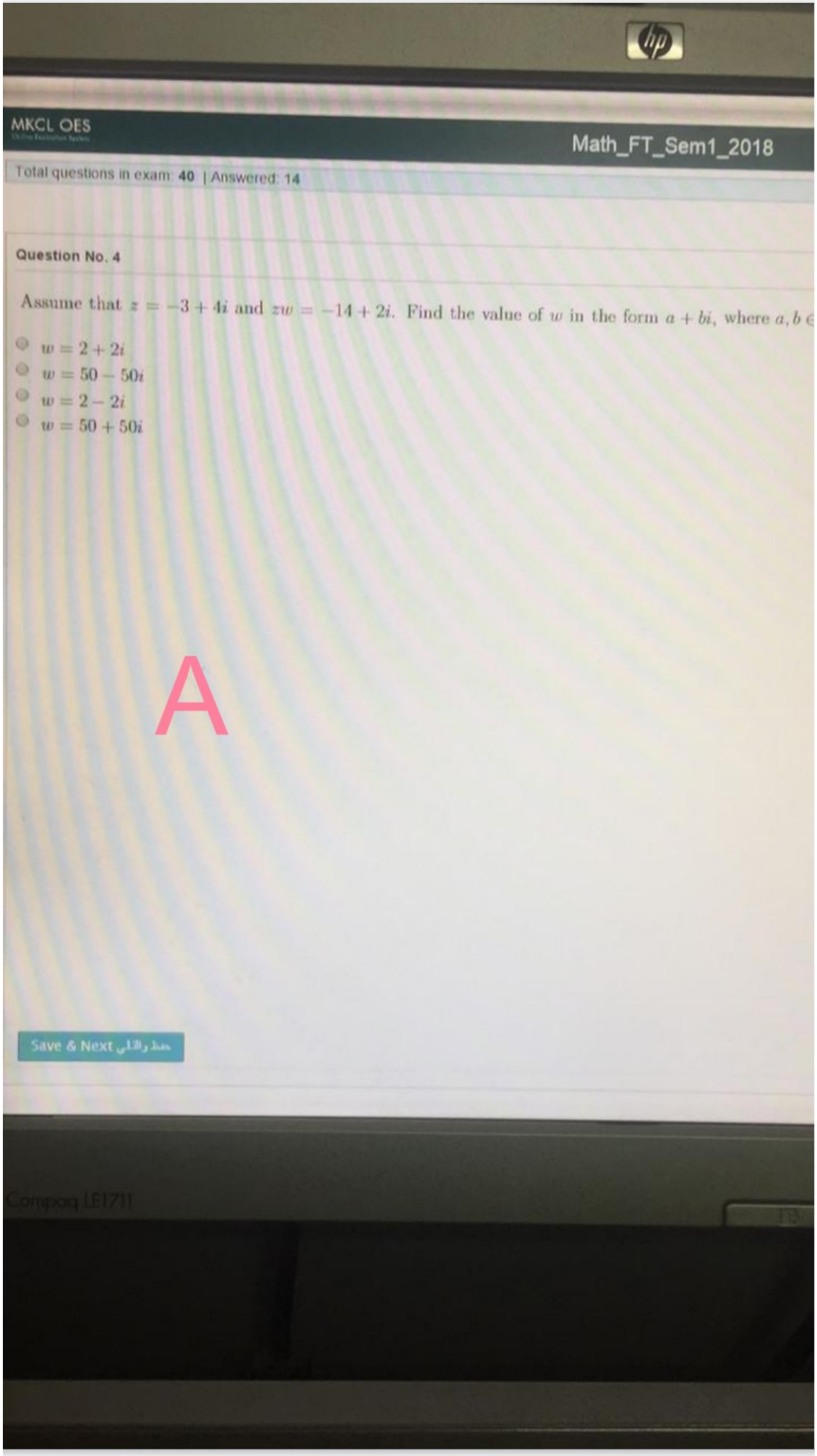

MKCL OES
Math_FT_Sem1_2018
Total questions in exam: 40 | Answered: 14
Question No. 4
Assume that $z = -3 + 4i$ and $zw = -14 + 2i$. Find the value of w in the form $a + bi$, where $a, b \in$
$w = 2 + 2i$
$w = 50 - 50i$
$w = 2 - 2i$
$w = 50 + 50i$
A
Save & Next

MKCL OES

Total questions in exam: 40 | Answered: 15

Question No. 7

The expression $(1 + \cot^2\theta)$ equals

- $\cos^2\theta$
- $\sec^2\theta$
- $\sin^2\theta$
- $\csc^2\theta$

D

Save & Next حفظ والتالي

MKCL OES
Online Evaluation System

Total questions in exam: **40** | Answered: **14**

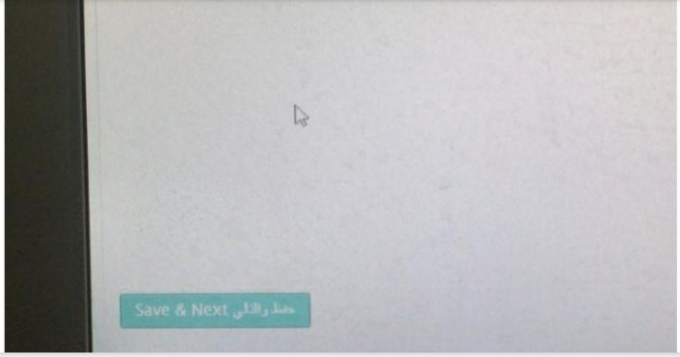
Question No. 40

The solution set of the equation $\log_5(x+2) + \log_5(x-2) = 1$ is

- ∅
- {-3}
- {3}
- {-3,3}

C

Save & Next

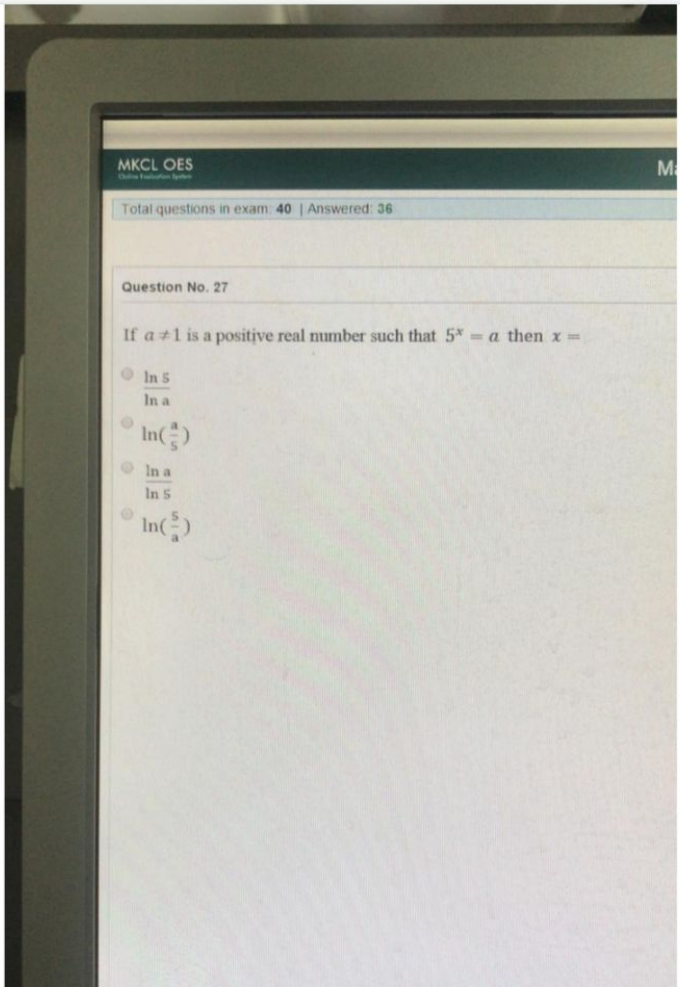


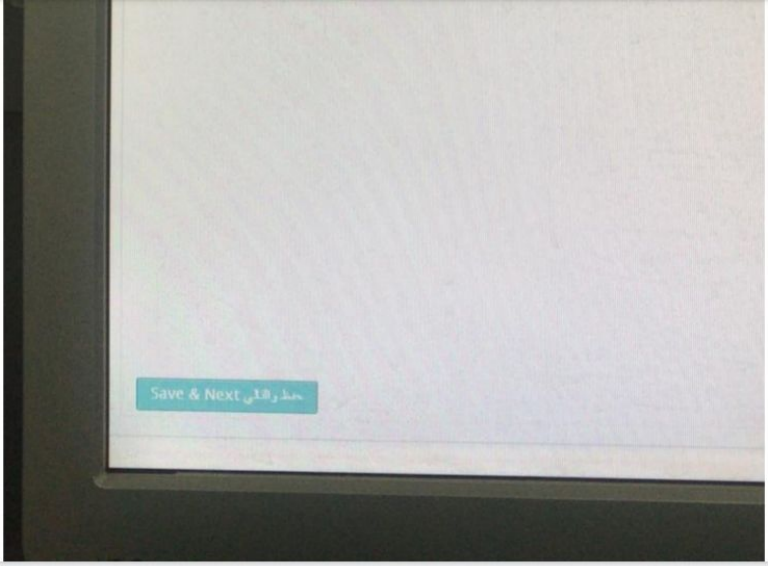
Total questions in exam: **40** | Answered: **38**

Question No. 4

Let $a \in \mathbb{R}$ and $f(x) = 0.9^{(a^2-3a+2)x-1} - a$. Give the condition on a such that $f(x)$ is increasing.

- $a \in (2, \infty)$
- $a \in (-\infty, 1)$
- $a \in (1, 2)$
- $a \in (-\infty, 1] \cup [2, \infty)$





Question No. 16

Find the value of 'c' that will allow this polynomial to be written as a perfect square.

$$x^2 - x + c$$

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

B

Total questions in exam: **40** | Answered: **31**

Question No. 2

Let $a \in \mathbb{R}$. If the solution set of the inequality $|4x - 8| + a > 0$ is $(-\infty, 2) \cup (2, +\infty)$

- a = 1
- a = 0
- a = 2
- a = -1

MKCL OES

Total questions in exam: **40** | Answered: **33**

Question No. 18

The solution set of the equation $-1+\log_8(3x+2)=-\frac{1}{3}$ is

- $\{\frac{2}{3}\}$
- $\{-\frac{2}{3}\}$
- $\{\frac{3}{2}\}$
- $\{-\frac{1}{3}\}$

A

Math_FT_S

nswered: **35**

Total questions in exam: 40 | Answered: 5

Question No. 14

The equation $y = 3^{x-1}$ can be written a

- $x = \log_3 y$
- $x = \log_3(y + 1)$
- $x = 1 + \log_3 y$
- $y = 1 + \log_3 x$

MKCL OES

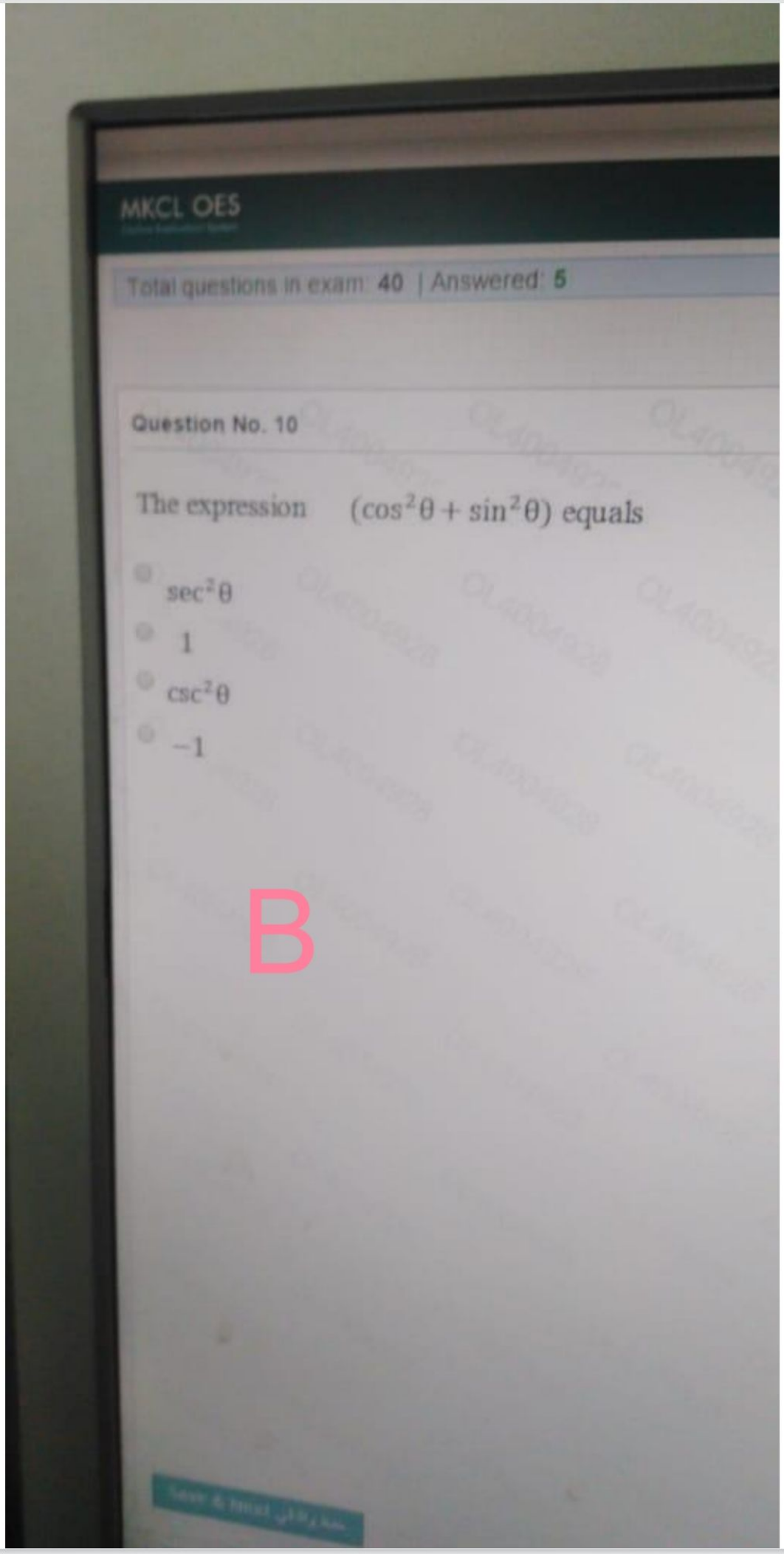
Total questions in exam: **40** | Answered:

Question No. 12

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

- -1
- 1
- 0
- $-\infty$

D


MKCL OES
Total questions in exam: 40 | Answered: 5
Question No. 10
The expression $(\cos^2\theta + \sin^2\theta)$ equals
$\sec^2\theta$
1
$\csc^2\theta$
-1
B

MKCL OES

Math

Total questions in exam: 40 | Answered: 40

Question No. 27

The range of the function $f(x) = 1 - \frac{3}{2+x}$ is

- $\mathbb{R} \setminus \{0\}$
- $\mathbb{R} \setminus \{3\}$
- $\mathbb{R} \setminus \{1\}$
- $\mathbb{R} \setminus \{-2\}$

D

Save & Next जतन व पुढे

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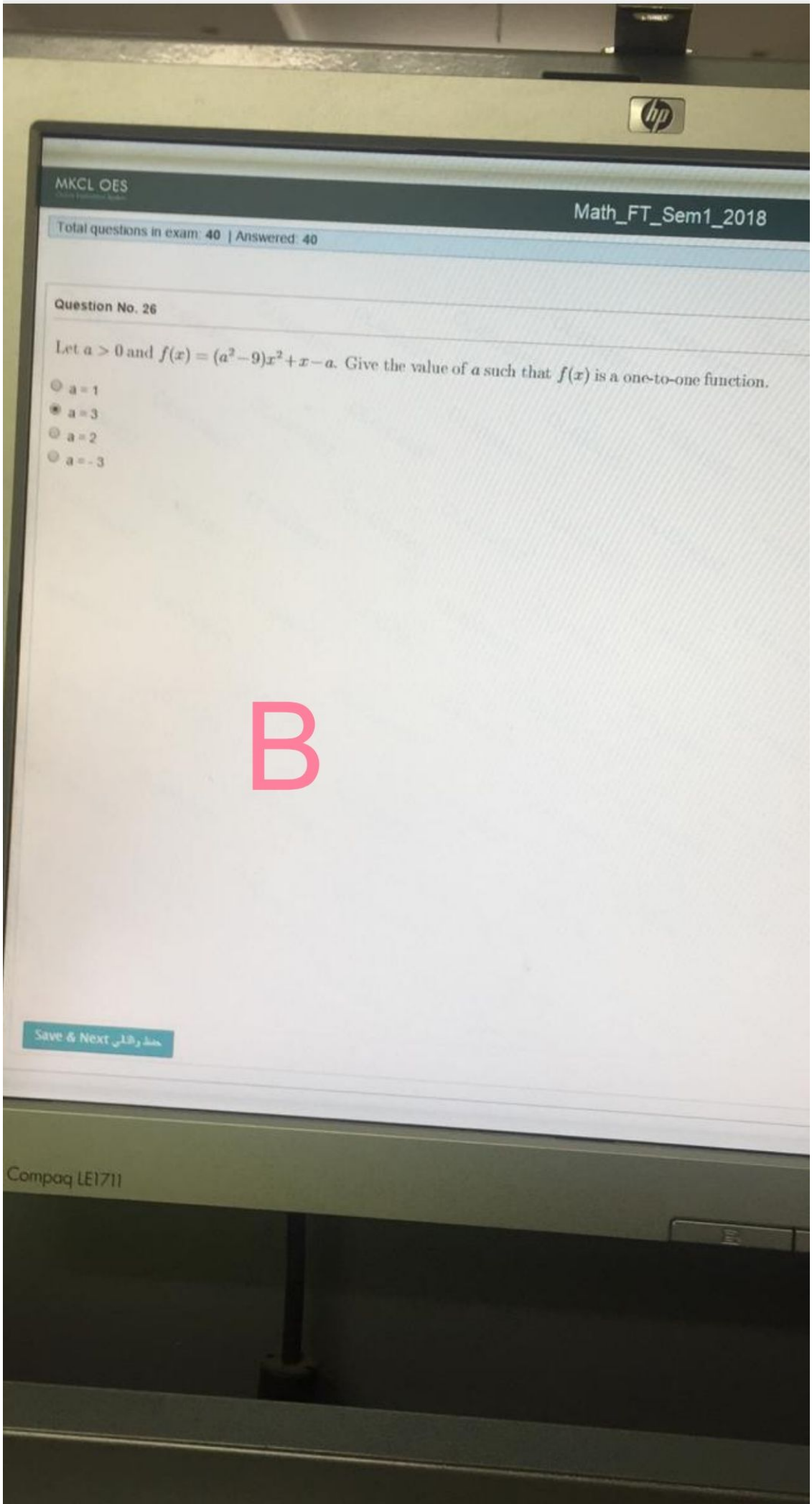
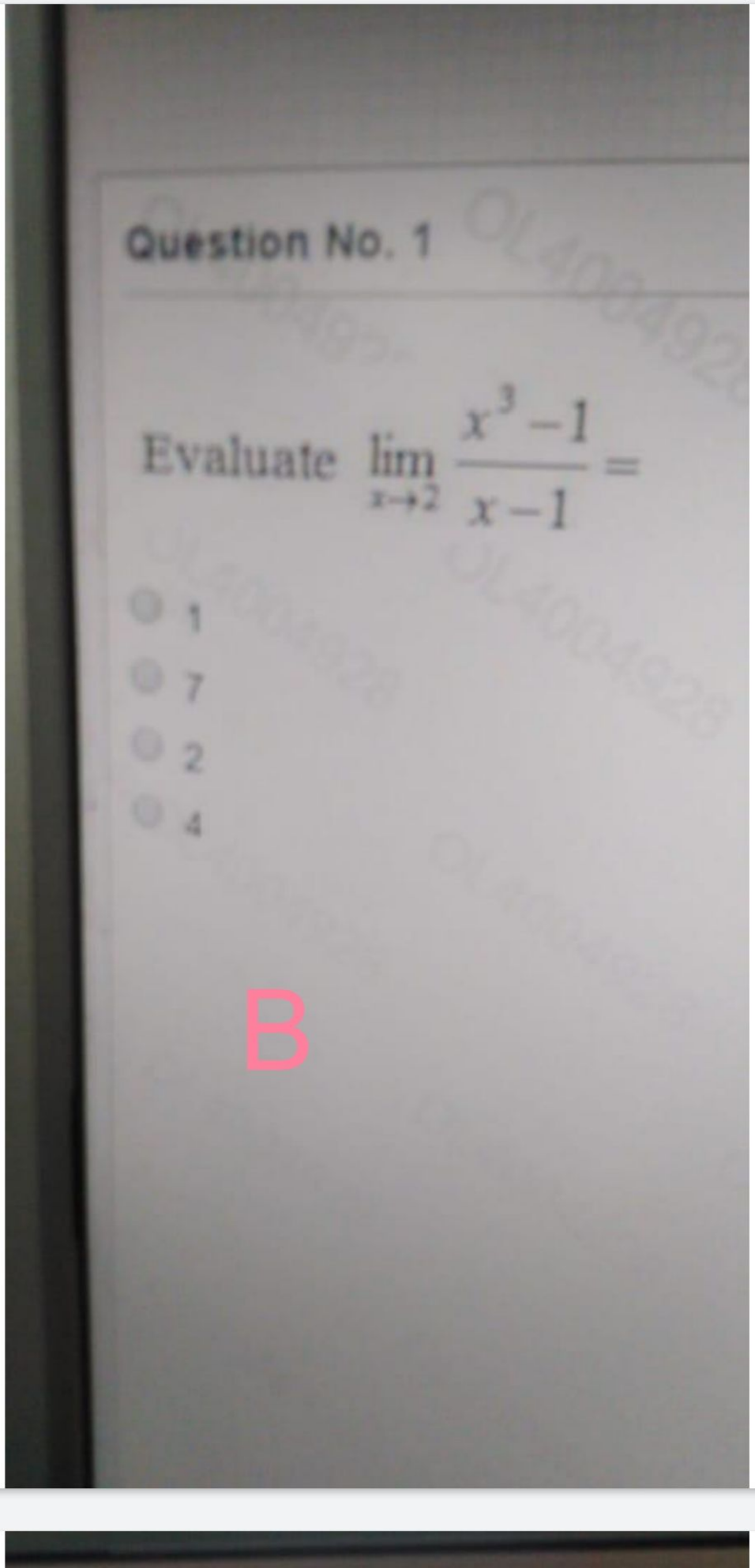

MKCL OES
Math_FT_Sem1_2018
Total questions in exam: 40 | Answered: 40
Question No. 26
Let $a > 0$ and $f(x) = (a^2-9)x^2+x-a$. Give the value of a such that $f(x)$ is a one-to-one function.
a = 1
a = 3
a = 2
a = - 3
B
Save & Next
Compaq LE1711


Question No. 1
Evaluate $\lim_{x \to 2} \frac{x^3 - 1}{x - 1} =$
1
7
2
4
B

MKCL OES

Math_FT

Total questions in exam: **40** | Answered: **10**

Question No. 37

If $f(x)$ is a polynomial such that $f(2) = 3$ then the remainder of the division $f(x) \div (x - 2)$ equals:

- 2
- -2
- 3
- -3

C

Save & Next حفظ والتالي

MKCL OES

Total questions in exam: 40 | Answered: 10

Question No. 36

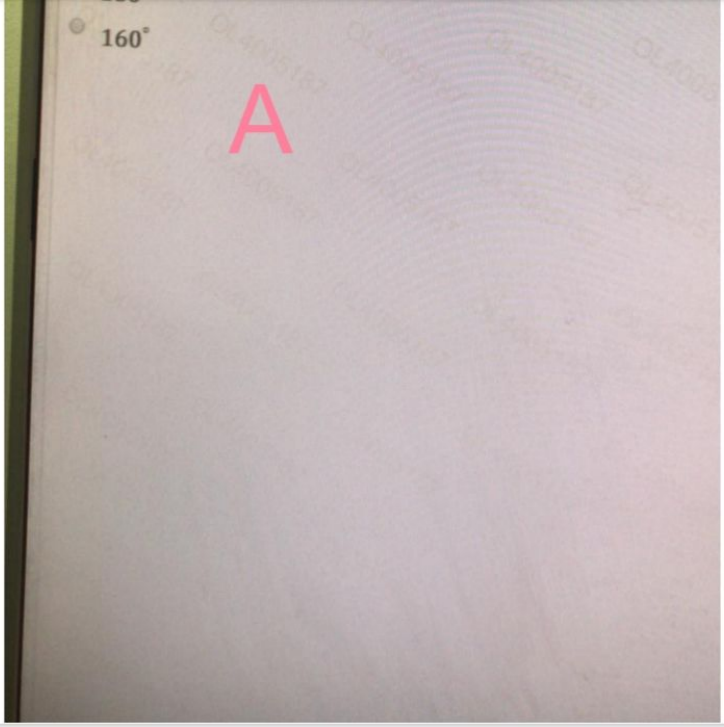
The function $f(x)$ is constant on an interval I if for $x_1, x_2 \in I$,

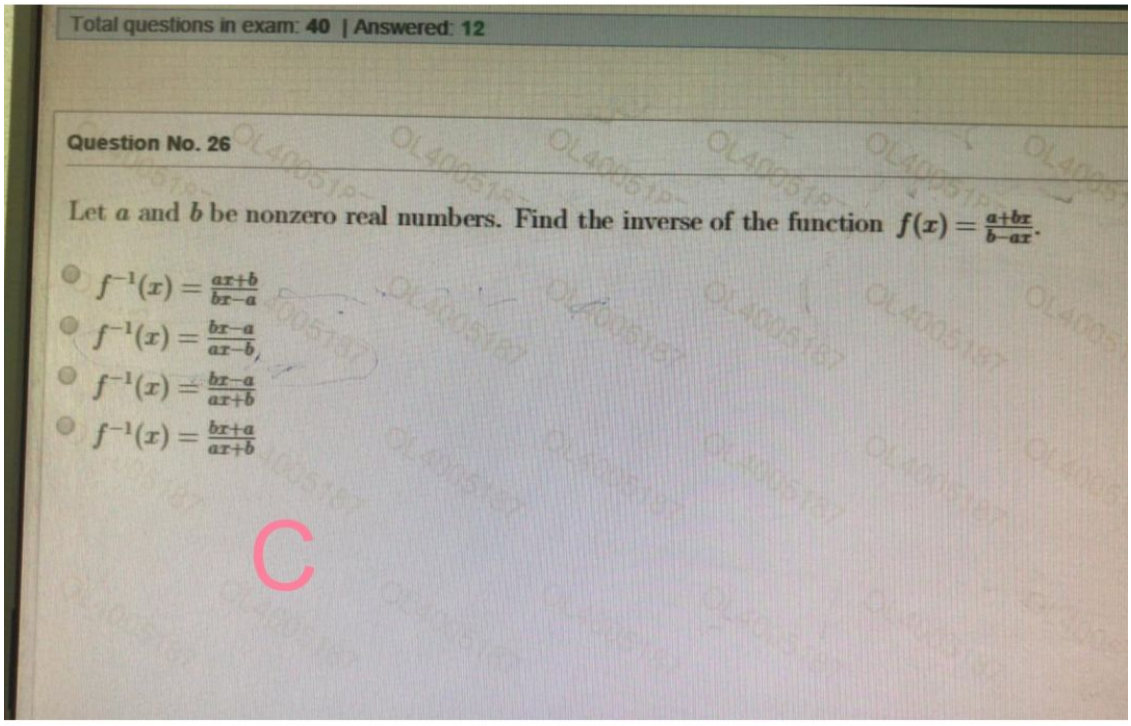
- if $x_1 < x_2, then\ f(x_1) < f(x_2)$,
- if $x_1 \neq x_2, then\ f(x_1) = f(x_2)$,
- if $x_1 < x_2, then\ f(x_1) > f(x_2)$,
- if $x_1 > x_2, then\ f(x_1) > f(x_2)$,

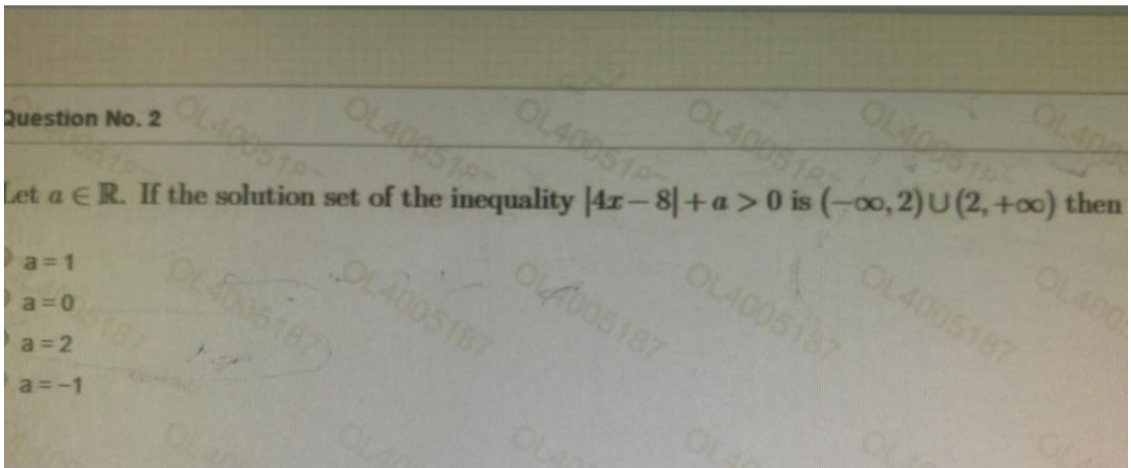
B

Save & Next

MKCL OES


160°
A


Total questions in exam: 40 | Answered: 12
Question No. 26
Let a and b be nonzero real numbers. Find the inverse of the function $f(x) = \frac{a+bx}{b-ax}$.
$f^{-1}(x) = \frac{ax+b}{bx-a}$
$f^{-1}(x) = \frac{bx-a}{ax-b}$
$f^{-1}(x) = \frac{bx-a}{ax+b}$
$f^{-1}(x) = \frac{bx+a}{ax+b}$
C

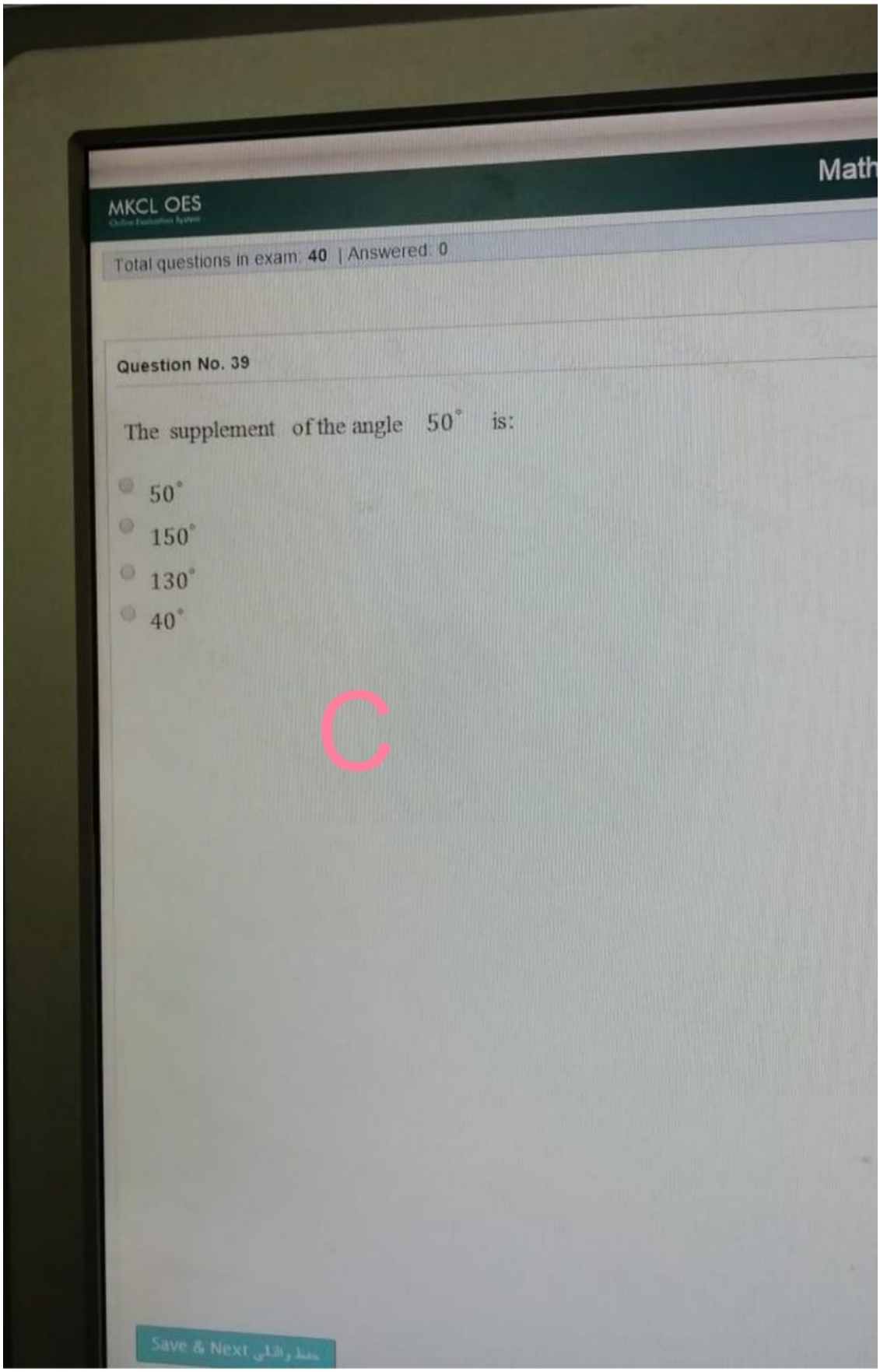

Question No. 2
Let $a \in \mathbb{R}$. If the solution set of the inequality $|4x-8|+a>0$ is $(-\infty,2)\cup(2,+\infty)$ then
a = 1
a = 0
a = 2
a = -1

Question No. 40

The graph of $f(x) = -\left(\frac{1}{2}\right)^x$ is

- Increasing
- Constant
- Decreasing
- Decreasing and Increasing

C


MKCL OES
Math
Total questions in exam: 40 | Answered: 0
Question No. 39
The supplement of the angle 50° is:
50°
150°
130°
40°
Save & Next

MKCL OES

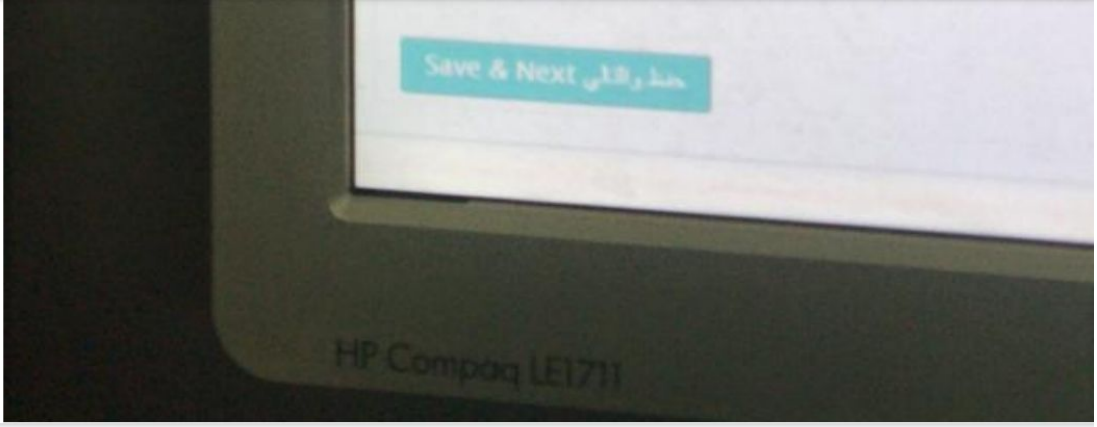
Total questions in exam: **40** | Answered: **10**

Question No. 39

The equation $y = \log_a x$ is equivalent to the equation

- $x = y^a$
- $x = a^y$
- $y = x^a$
- $y = a^x$

B



Total questions in exam: **40** | Answered: **12**

Question No. 39

Use set notation, and write the elements belonging to the set {x|x is a natural number less than 3}

- ∅
- {0}
- {1,2}
- {1,2,3}

C

MKCL OES
Online Evaluation System

Total questions in exam: 40 | Answered: 11

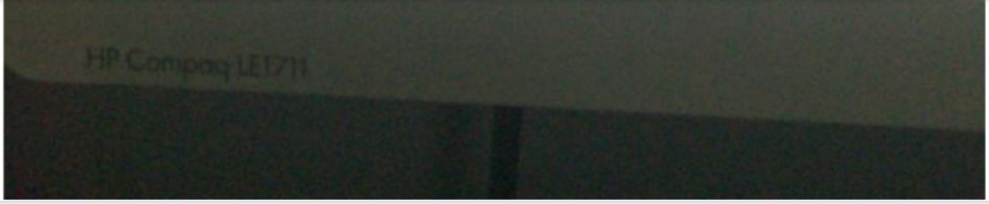
Question No. 9

Evaluate $\lim_{x \to 2} \frac{x-2}{|x-2|} =$

- -2
- 0
- 2
- Does not exist

D

Save & Next



MKCL OES

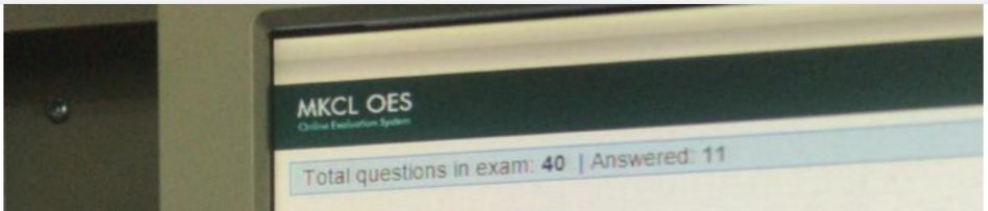
Total questions in exam: **40** | Answered: **7**

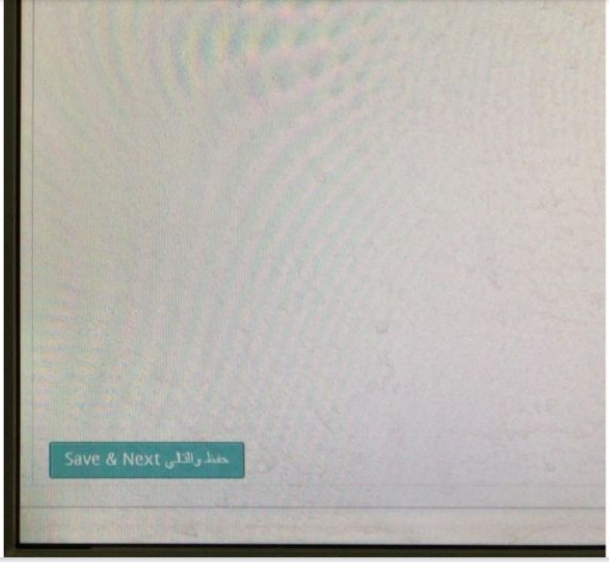
Question No. 27

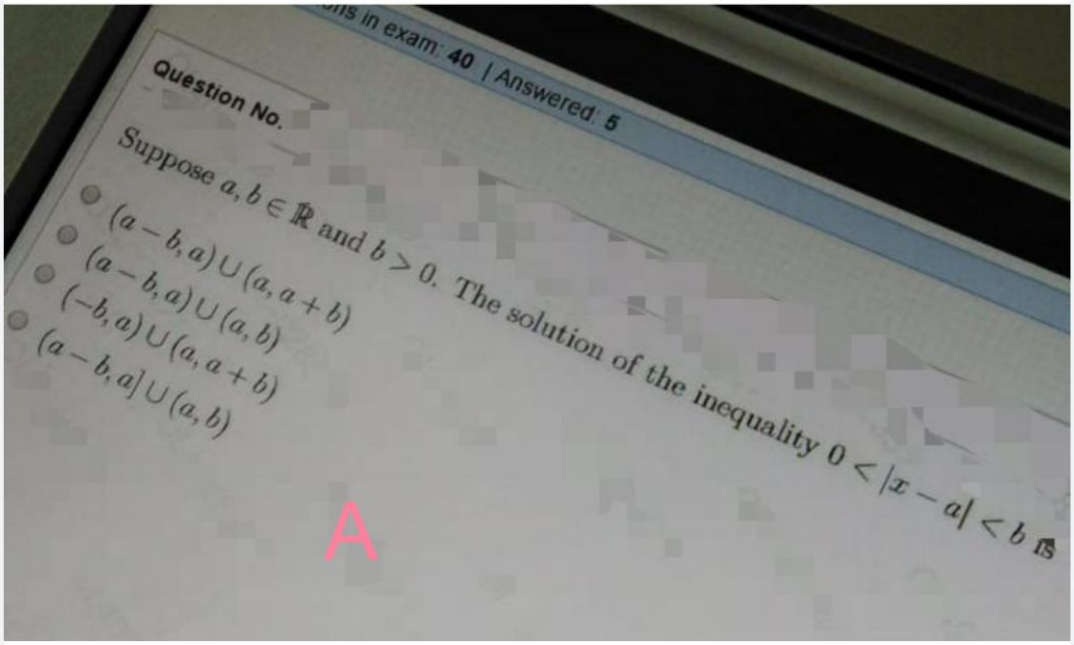
If $f(x) = -\frac{1}{3}x + 1$, the domain of $f^{-1}(x)$ is

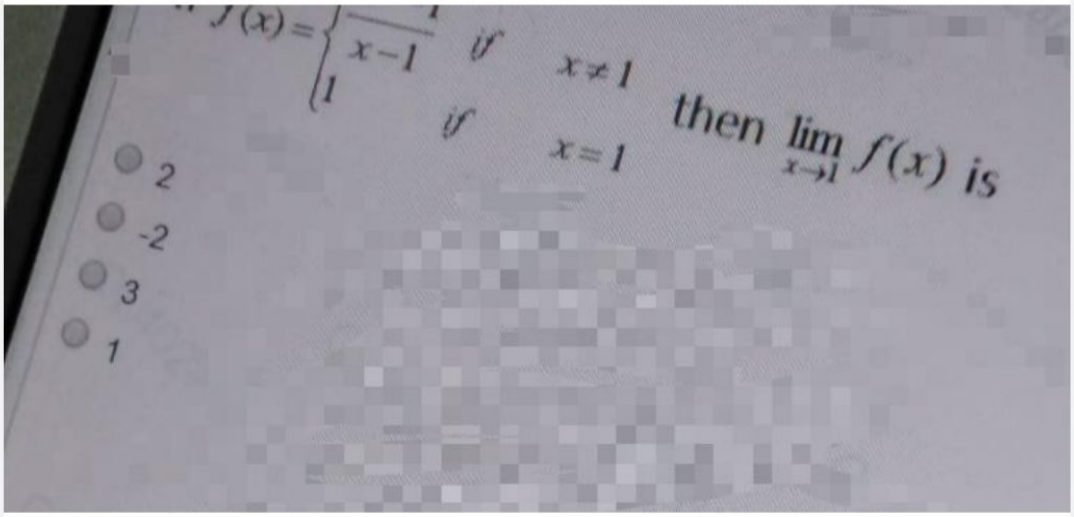
- $[-3,1)$
- $[-\frac{1}{3},1)$
- $[0,\infty)$
- all real numbers

D




Save & Next حفظ والتالي


ns in exam: 40 | Answered: 5
Question No.
Suppose $a, b \in \mathbb{R}$ and $b > 0$. The solution of the inequality $0 < |x - a| < b$ is
$(a-b, a) \cup (a, a+b)$
$(a-b, a) \cup (a, b)$
$(-b, a) \cup (a, a+b)$
$(a-b, a] \cup (a, b)$
A


$f(x) = \begin{cases} \frac{1}{x-1} & \text{if } x \neq 1 \\ 1 & \text{if } x = 1 \end{cases}$ then $\lim_{x \to 1} f(x)$ is
2
-2
3
1

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Question No. 23

The line through the point (-1,-3) with slope equal to zero is

- x = -3
- x = -1
- y = -3
- y = -1

Question No. 23

Simplify $\frac{1}{9}\left(\frac{12}{4}m - \frac{9}{2}n - 27\right)$

- $\frac{m}{15} - \frac{n}{6} - 9$
- $12m - 3n - 9$
- $\frac{1}{3}m - \frac{n}{2} - 3$
- 27

C

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MKCL OES
Online Evaluation System

Total questions in exam: **40** | Answered: **0**

Question No. 7

The complement of the angle 65° is:

- 25°
- 115°
- 125°
- 35°

A

MKCL OES
Online Evaluation System

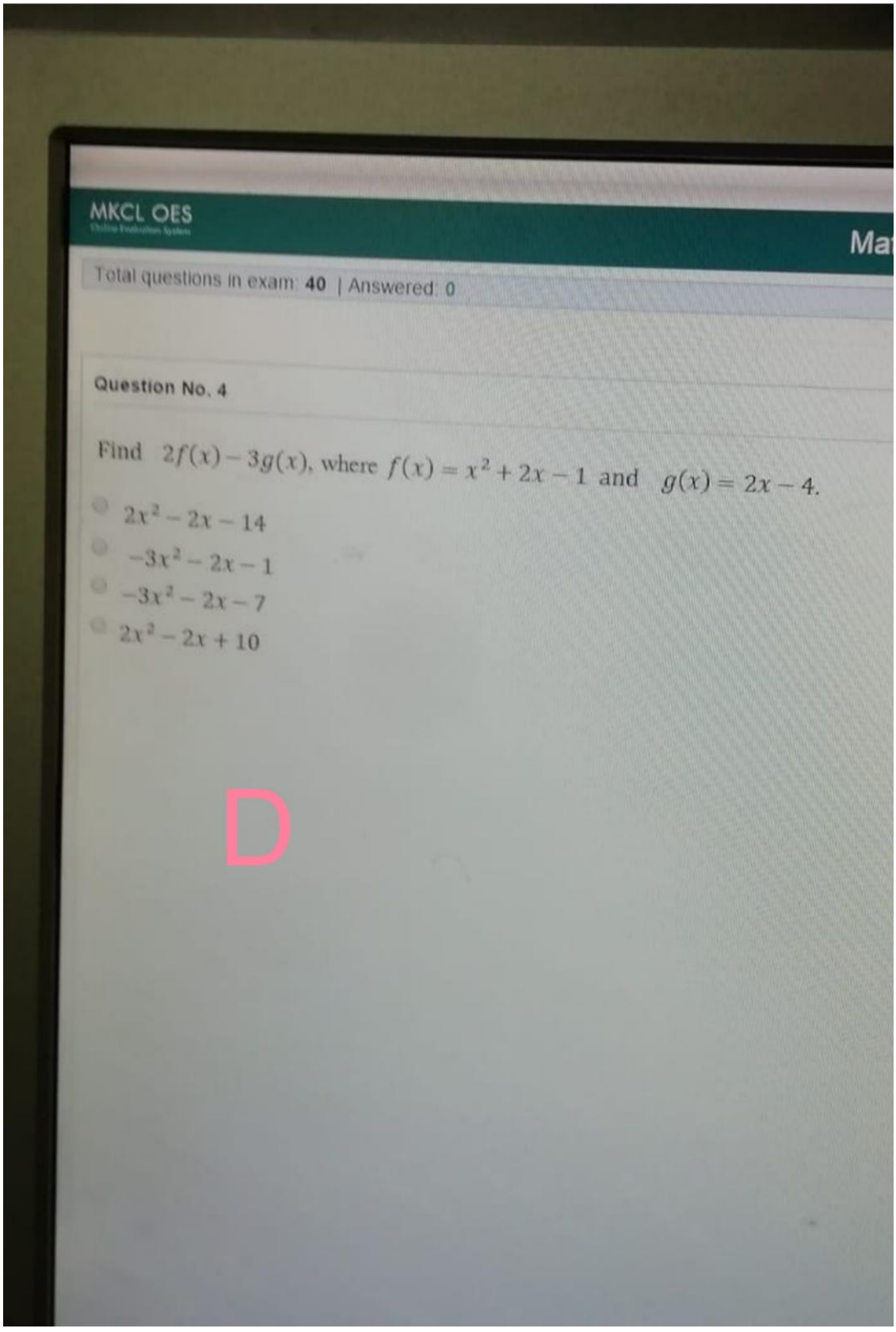
Total questions in exam: **40** | Answered: **0**

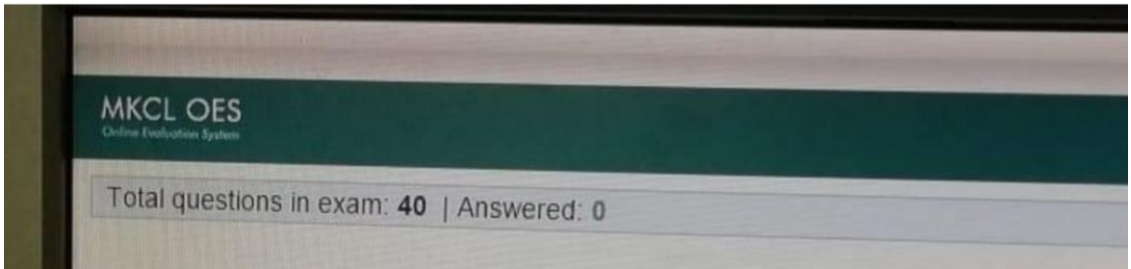
Question No. 11

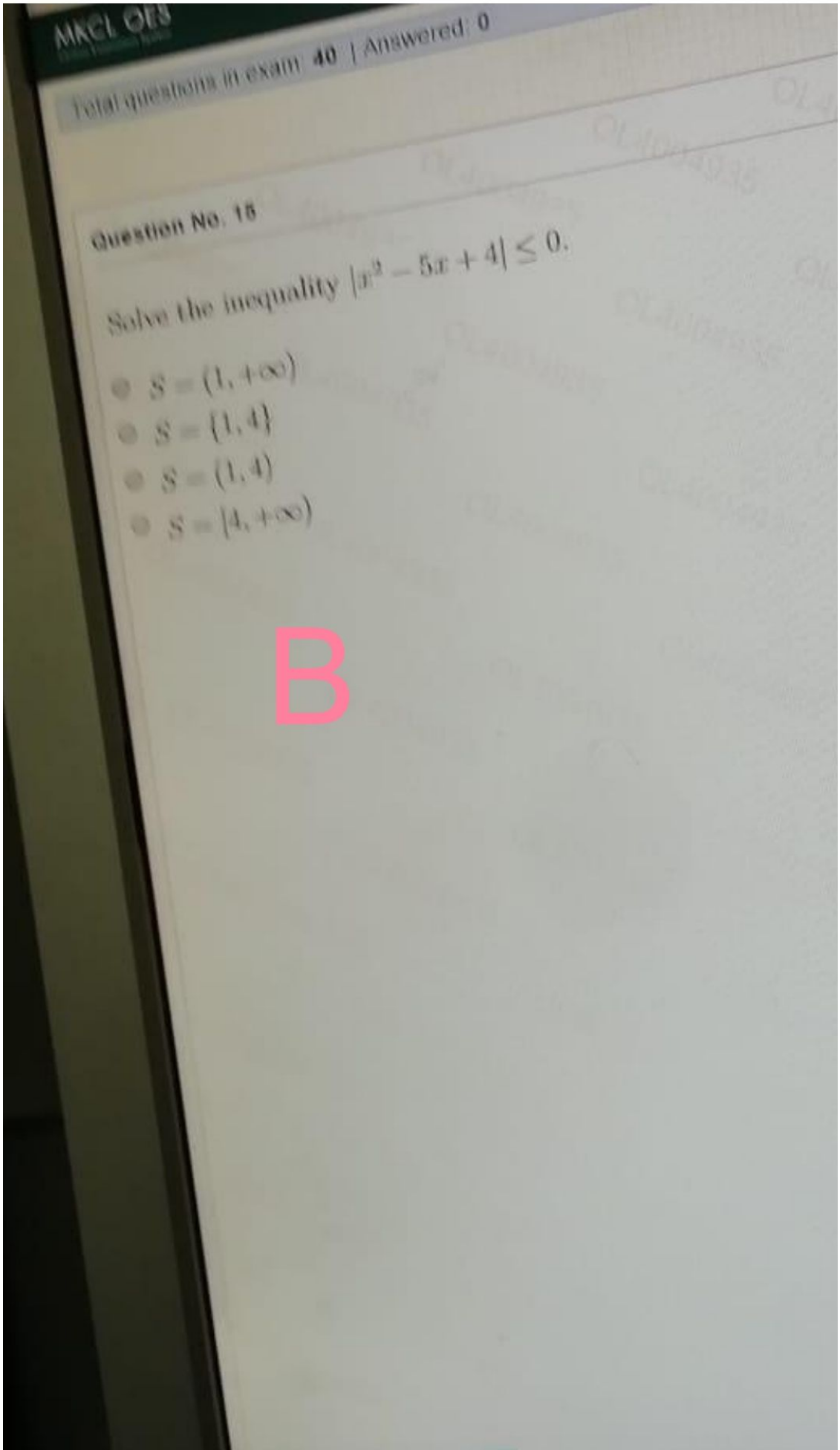
If x+a is a factor of the polynomial f(x) then

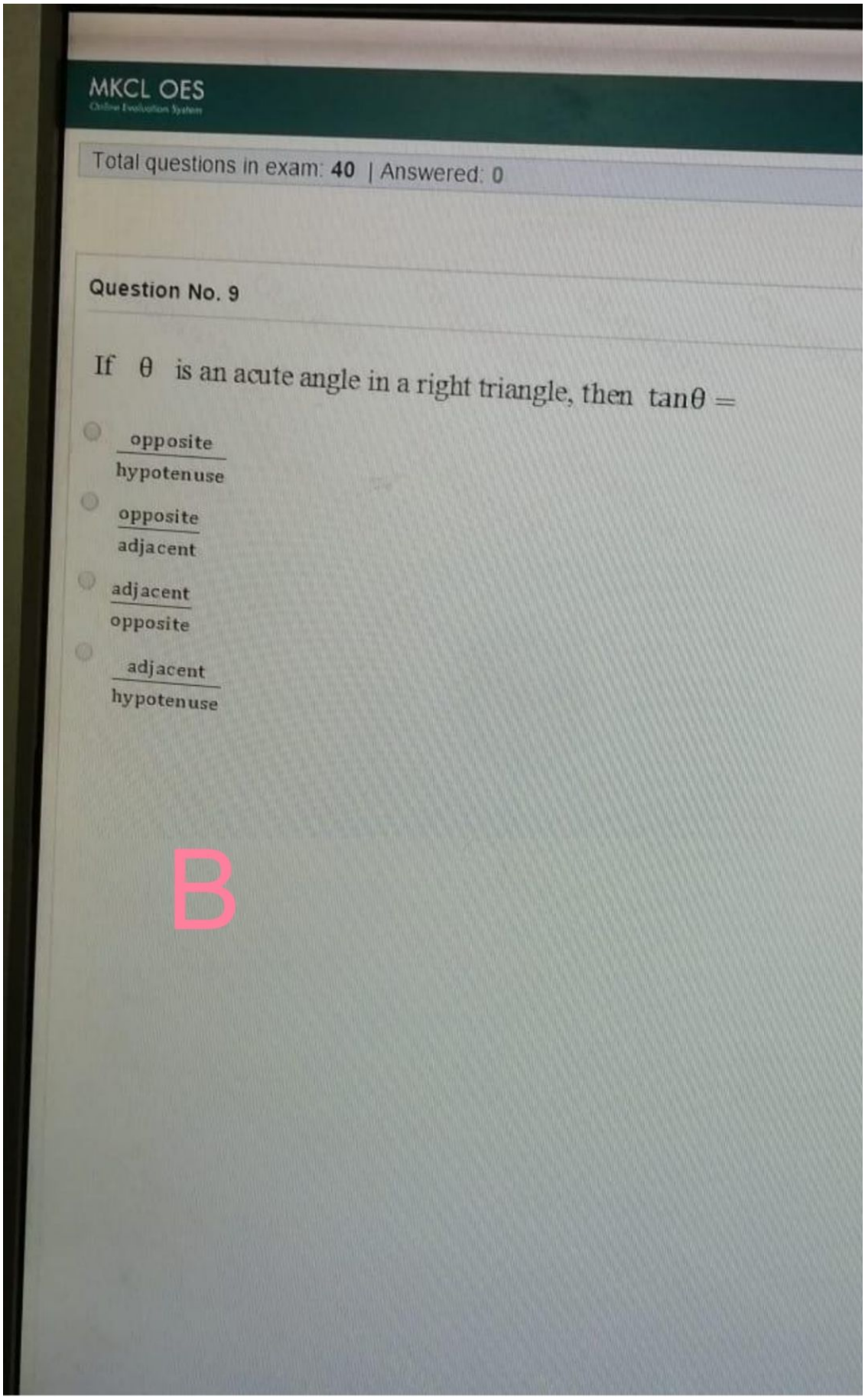
- $f(-a) = 0$
- $f(a) = -a$
- $f(-a) \neq 0$
- $f(a) = 0$

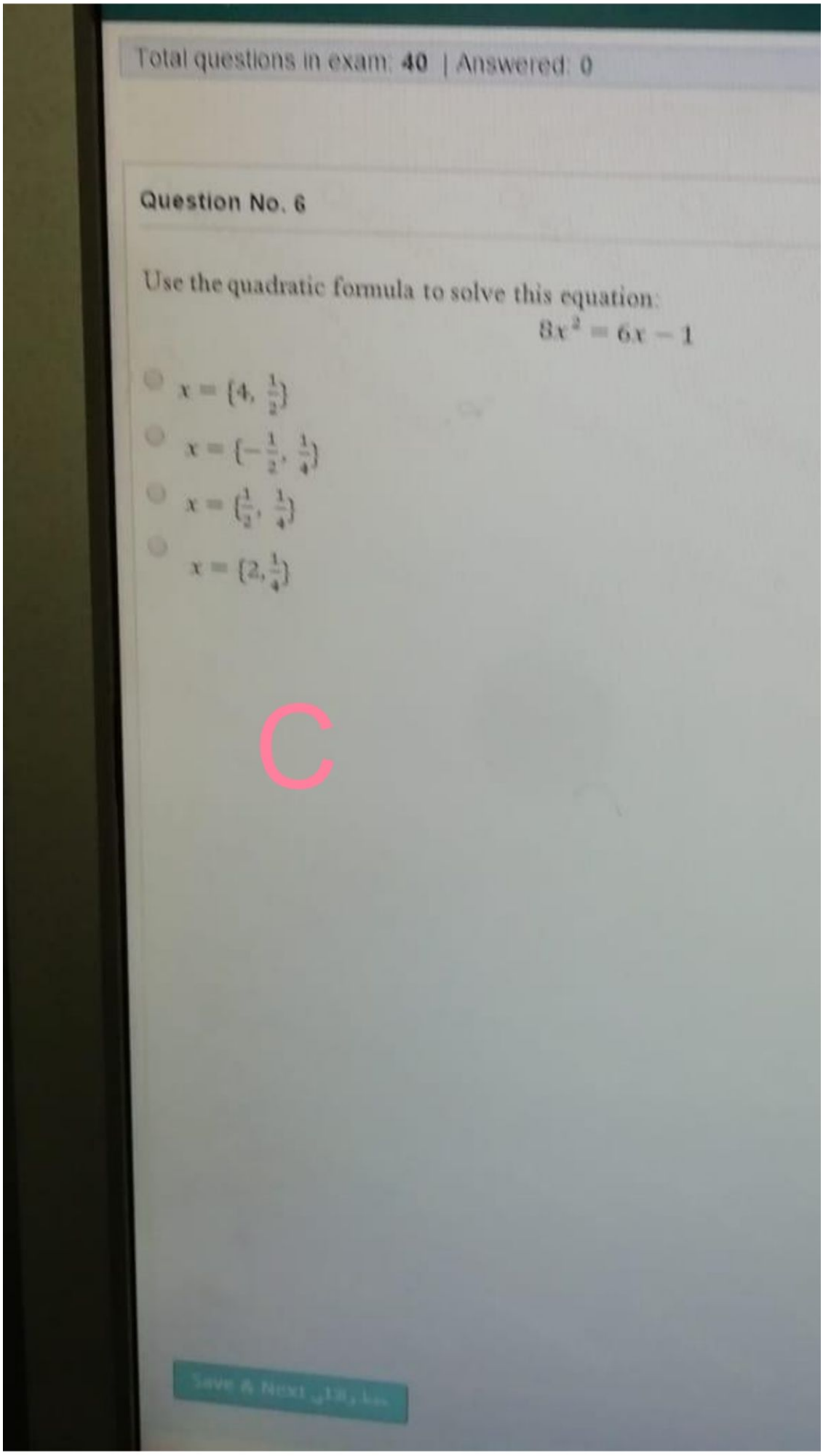
A

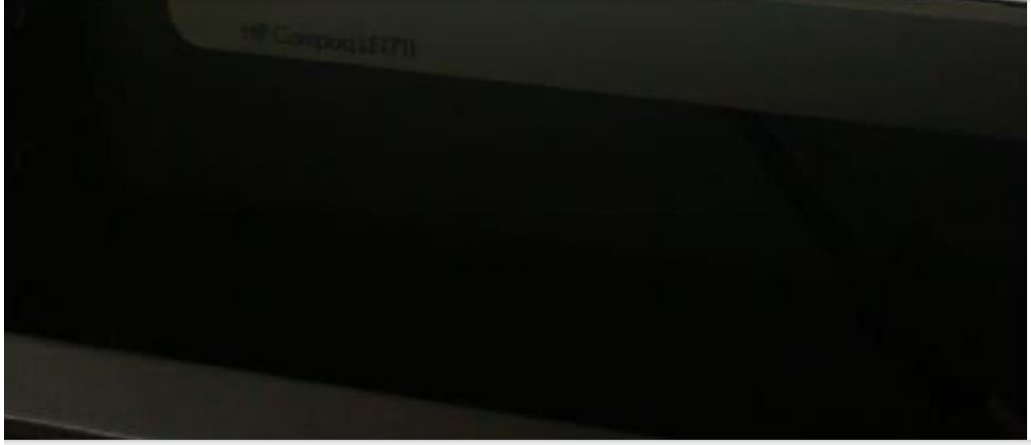

MKCL OES
Total questions in exam: 40 | Answered: 0
Question No. 4
Find $2f(x)-3g(x)$, where $f(x)=x^2+2x-1$ and $g(x)=2x-4$.
$2x^2-2x-14$
$-3x^2-2x-1$
$-3x^2-2x-7$
$2x^2-2x+10$
D


MKCL OES
Total questions in exam: 40 | Answered: 0


MACL QES
Total questions in exam: 40 | Answered: 0
Question No. 15
Solve the inequality $|x^2 - 5x + 4| \leq 0$.
$S = (1, +\infty)$
$S = \{1, 4\}$
$S = (1, 4)$
$S = [4, +\infty)$
B


MKCL OES
Online Evaluation System
Total questions in exam: 40 | Answered: 0
Question No. 9
If θ is an acute angle in a right triangle, then tanθ =
opposite / hypotenuse
opposite / adjacent
adjacent / opposite
adjacent / hypotenuse
B


Total questions in exam: 40 | Answered: 0
Question No. 6
Use the quadratic formula to solve this equation:
$8x^2 = 6x - 1$
$x = \{4, \frac{1}{2}\}$
$x = \{-\frac{1}{2}, \frac{1}{4}\}$
$x = \{\frac{1}{2}, \frac{1}{4}\}$
$x = \{2, \frac{1}{4}\}$
C



Total questions in exam: 40 | Answered: 7

Question No. 22

Let $a \in \mathbb{R}$. Give the condition on a that makes the relation $F = \{(-1,1),(2,1),(a,3),(-2,a)\}$ a functi

- $a \in \{-1,-2,1,2,3\}$
- $a \in \mathbb{R}\backslash\{1,3\}$
- $a \in \mathbb{R}$
- $a \in \mathbb{R}\backslash\{-1,2,-2\}$

D

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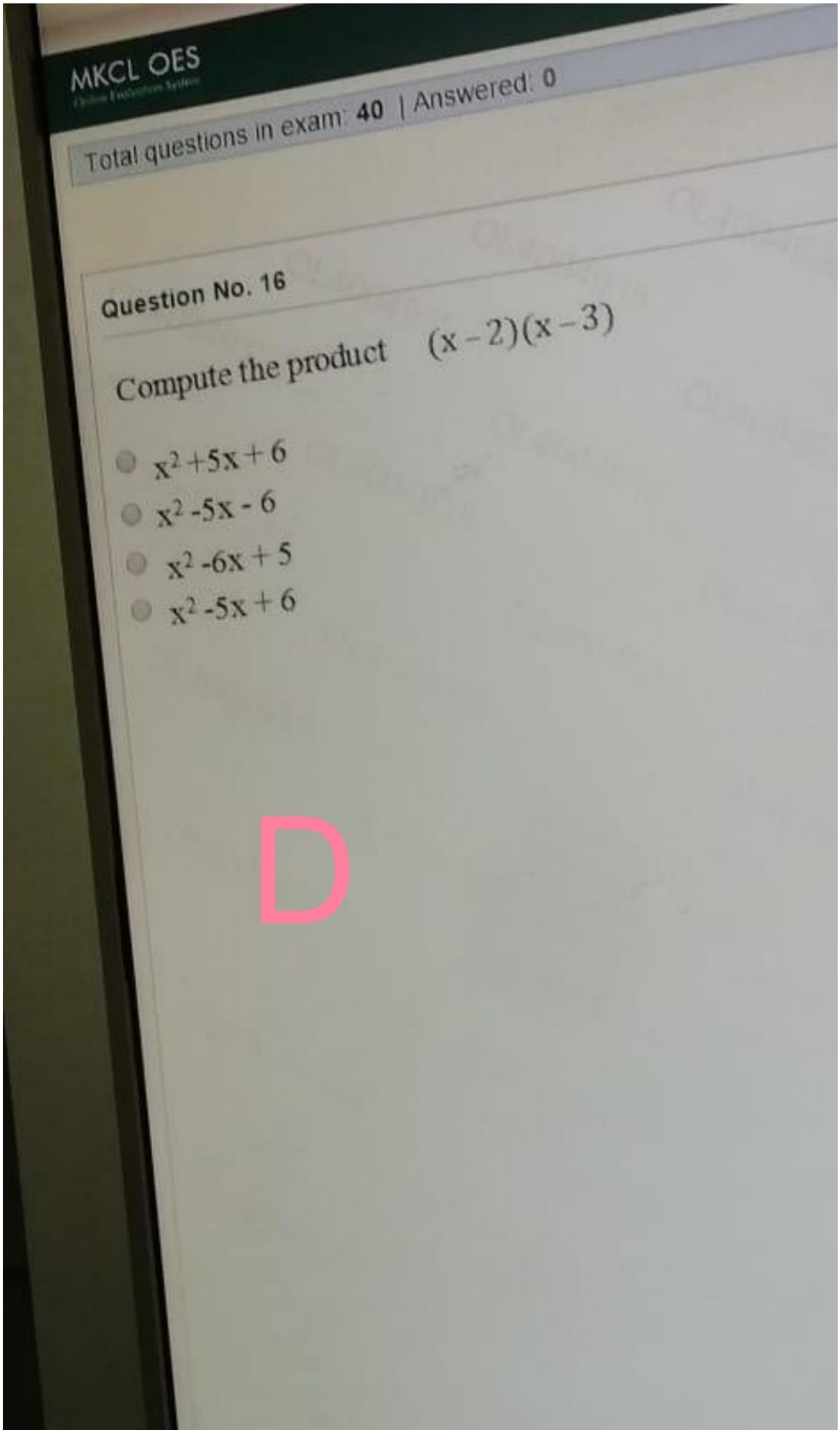
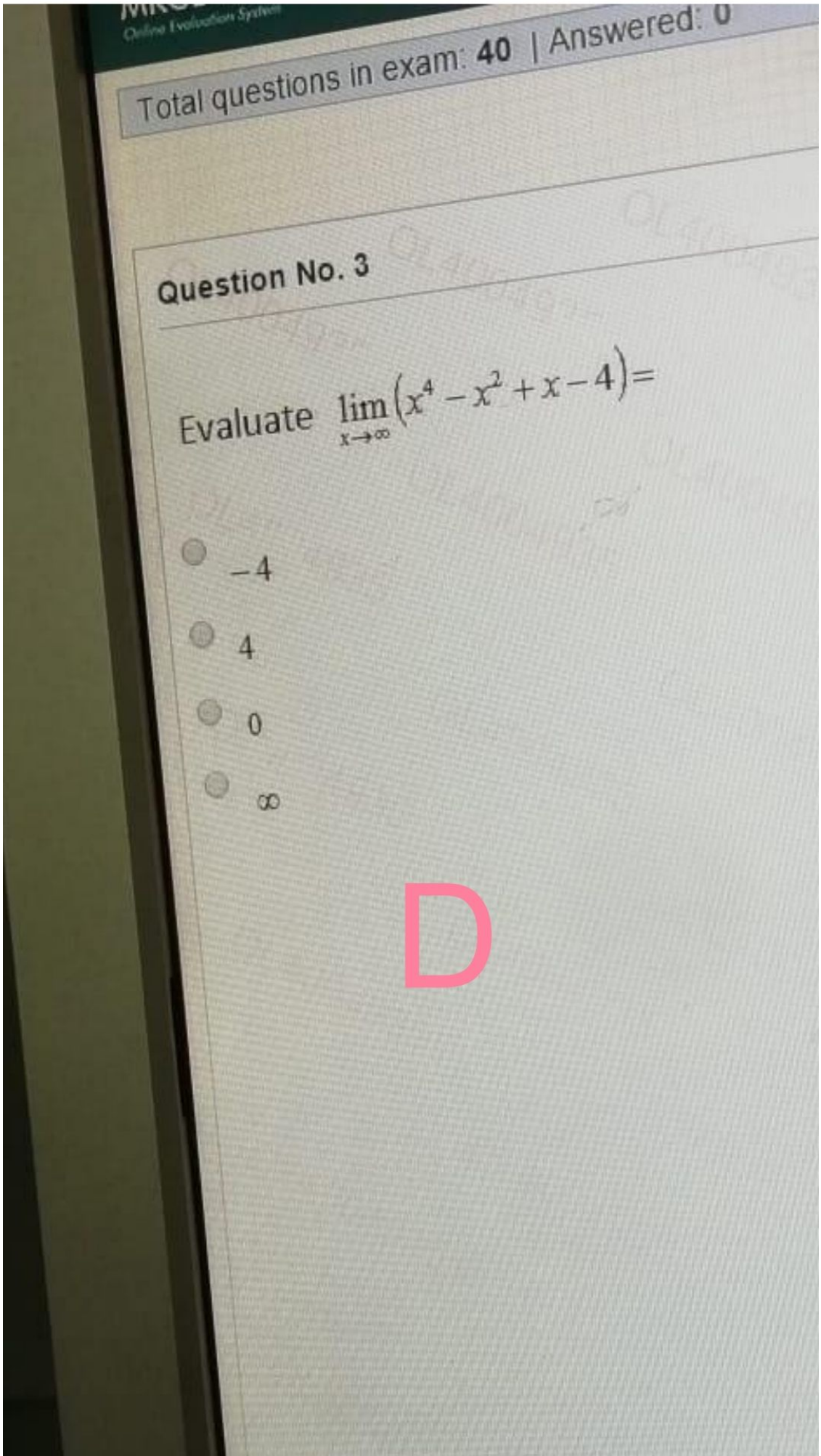
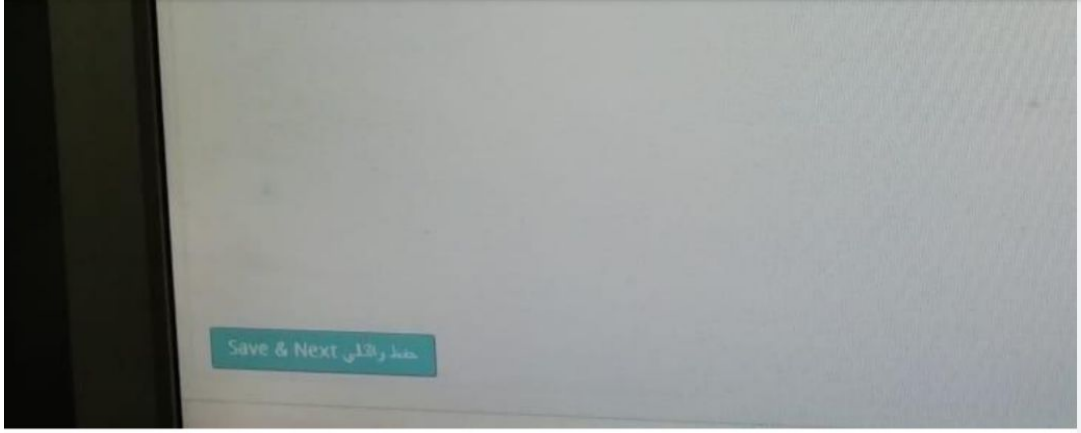

MKCL OES
Total questions in exam: 40 | Answered: 0
Question No. 16
Compute the product $(x-2)(x-3)$
x^2+5x+6
x^2-5x-6
x^2-6x+5
x^2-5x+6
D


Total questions in exam: 40 | Answered: 0
Question No. 3
Evaluate $\lim_{x\to\infty}(x^4 - x^2 + x - 4) =$
-4
4
0
∞
D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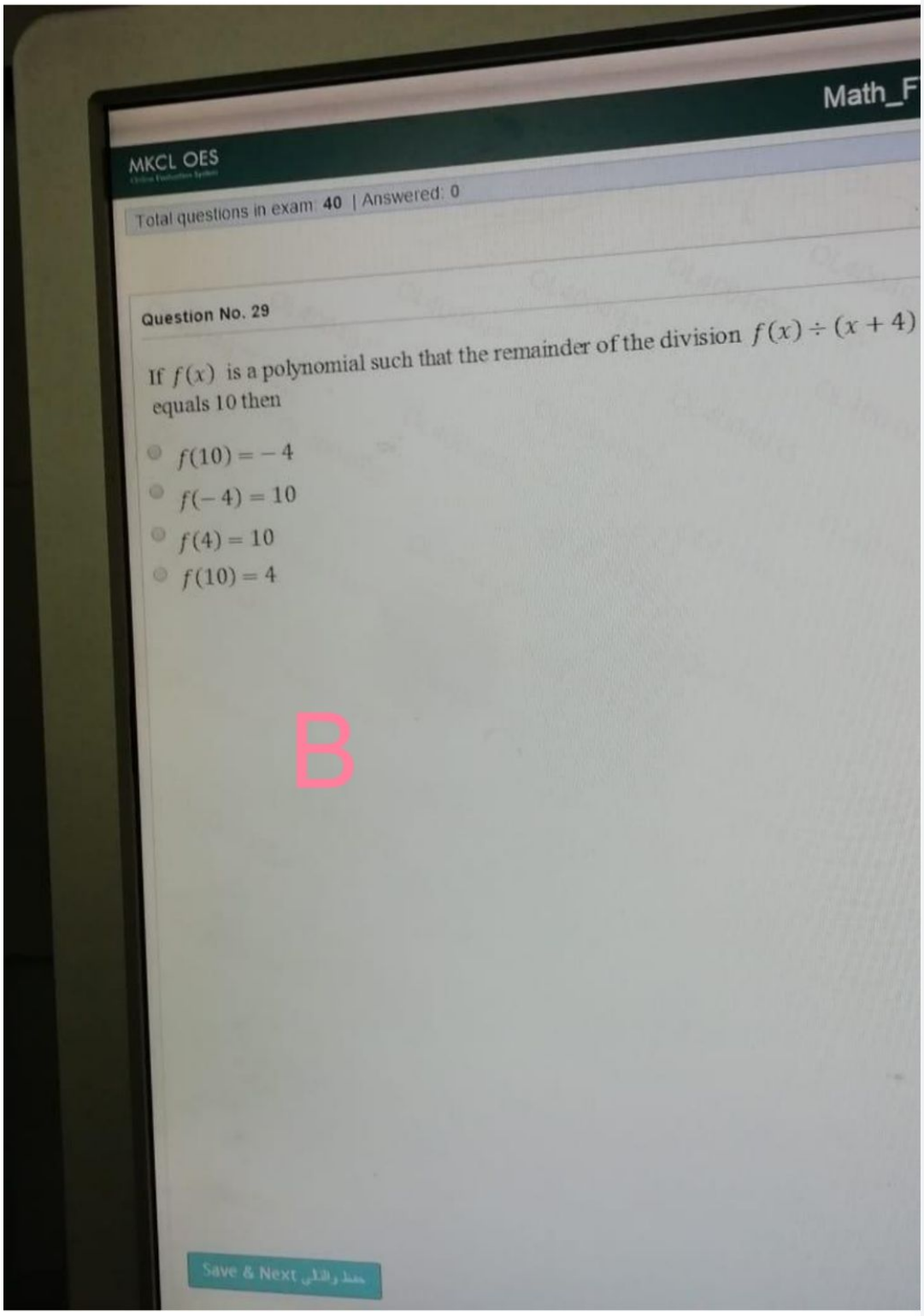

MKCL OES
Math_F
Total questions in exam: 40 | Answered: 0
Question No. 29
If $f(x)$ is a polynomial such that the remainder of the division $f(x) \div (x+4)$ equals 10 then
$f(10) = -4$
$f(-4) = 10$
$f(4) = 10$
$f(10) = 4$
B
Save & Next

Total questions in exam: **40** | Answered: **0**

Question No. 8

$\csc\theta =$

- $\frac{1}{\cos\theta}$
- $\frac{\cos\theta}{\sin\theta}$
- $\frac{1}{\sin\theta}$
- $\frac{\sin\theta}{\cos\theta}$

C

MKCL OES

Online Evaluation System

Total questions in exam: **40** | Answered: **0**

Question No. 5

The solution set of the equation $7(2x-1)=9+14x$ is

- 1
- Ø
- {1,2}
- {5}

B

MKCL OES

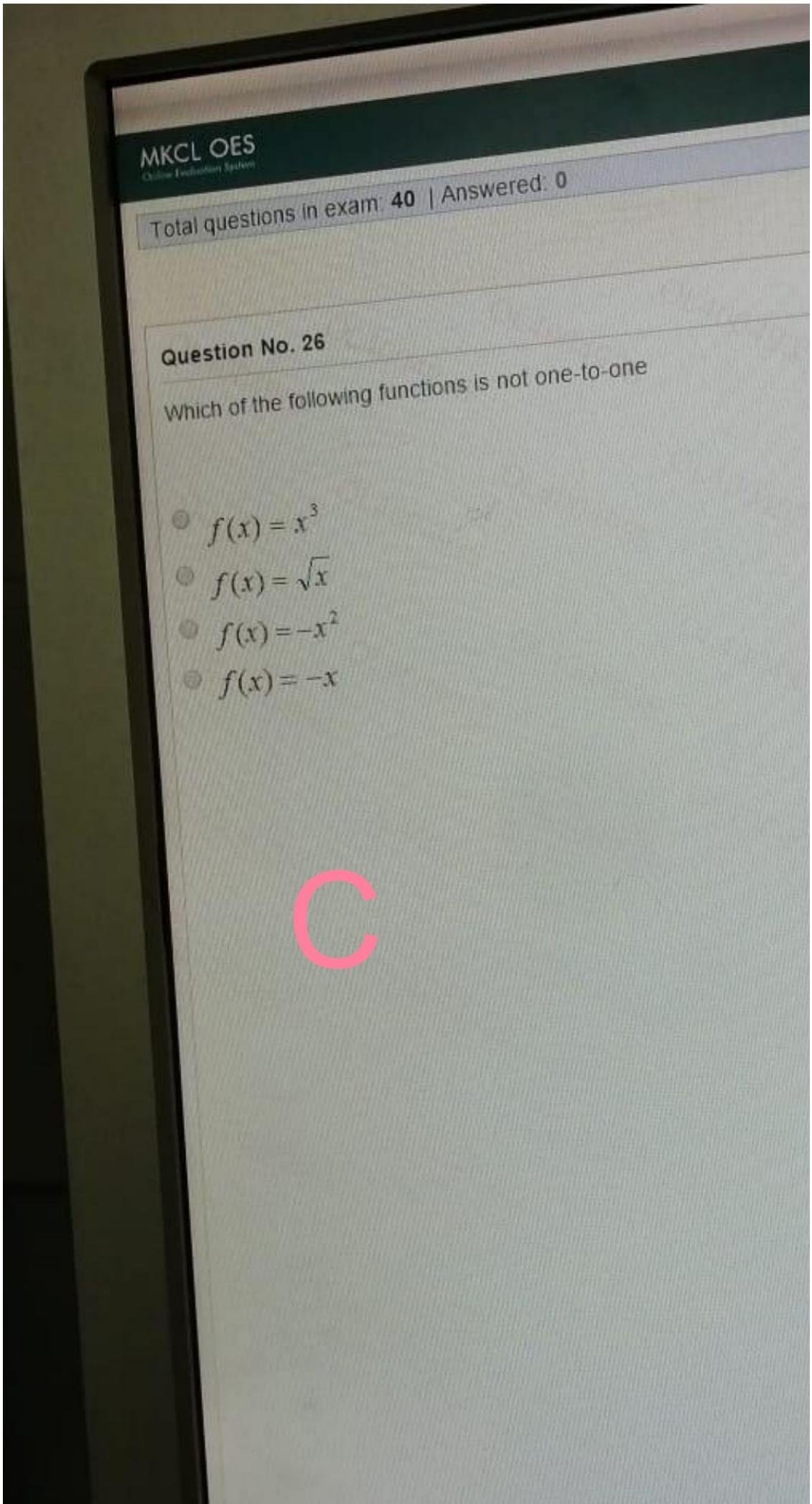
Total questions in exam: **40** | Answered: 0

Question No. 25

Find the quotient $\frac{6x^2}{2x^5} \div \frac{3x}{x^4}$,where $x \neq 0$

- $\frac{1}{3}$
- 1
- $\frac{1}{2}$
- -1

B


MKCL OES
Total questions in exam: 40 | Answered: 0
Question No. 26
Which of the following functions is not one-to-one
$f(x) = x^3$
$f(x) = \sqrt{x}$
$f(x) = -x^2$
$f(x) = -x$
C

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Total questions in exam: 40 | Answered: 0

Question No. 24

The equation $y = \log_2(3x)$ can be written as

- $x = \frac{2^y}{3}$
- $y = \frac{2^x}{3}$
- $y = 3^x$
- $x = 2^y$

A

MKCL OES

Total questions in exam: **40** | Answered: **0**

Question No. 30

Solve $1 < 7 - x < 10$

- (-6,-3)
- (-3,6)
- (-6,3)
- (3,6)

B

MKCL OES

Total questions in exam: **40** | Answered: **0**

Question No. 23

Evaluate: $|-12+(5-2)|$

- 9
- 6
- -3
- 4

A

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Total questions in exam: 40 | Answered: 0

Question No. 28

If $\theta = 90^\circ$ then θ is called

- an obtuse angle
- a straight angle
- a right angle
- an acute angle

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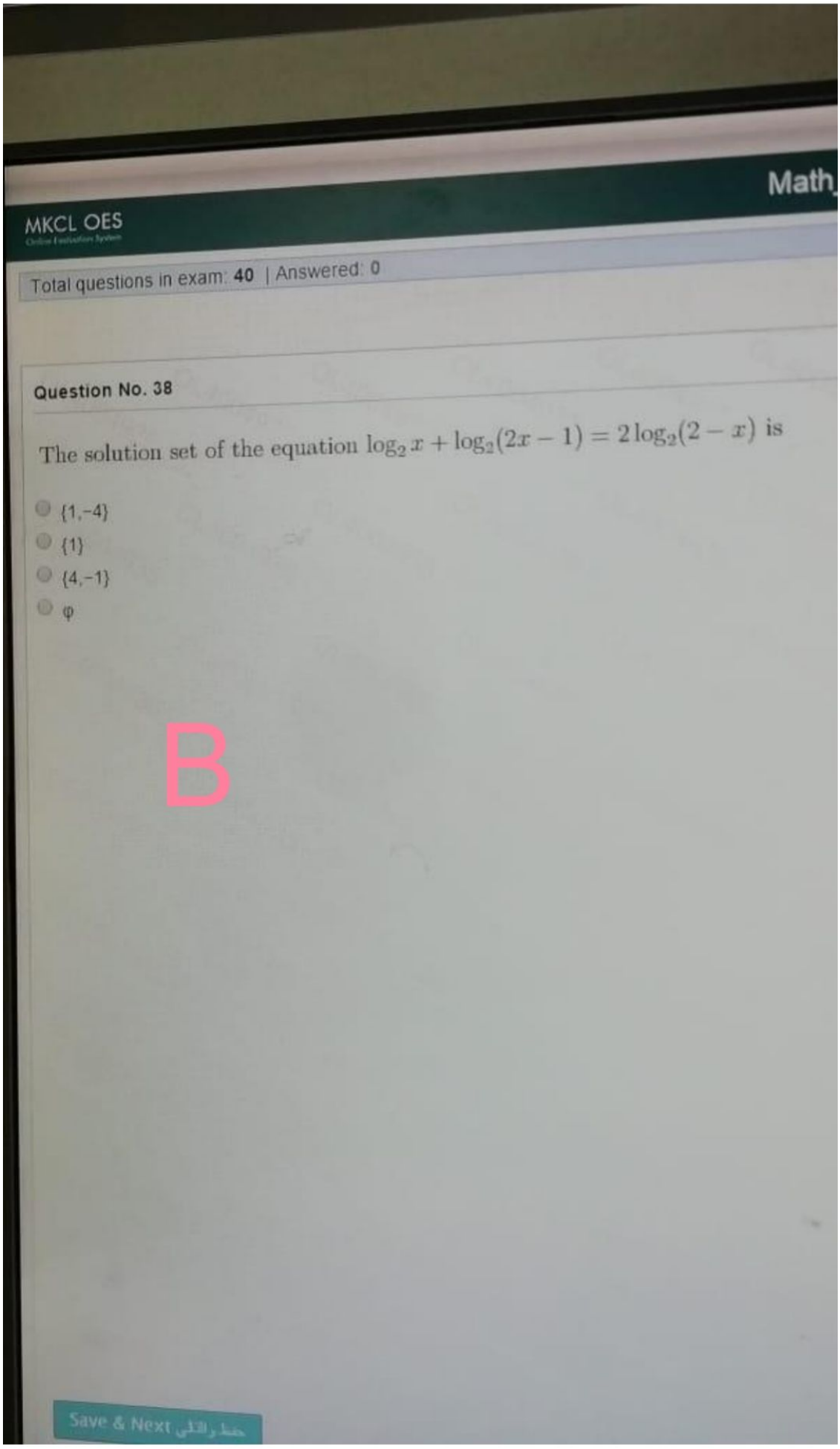
Total questions in exam: 40 | Answered: 0

Question No. 39

The supplement of the angle 50° is:

- 50°
- 150°
- 130°
- 40°

C


MKCL OES
Math
Total questions in exam: 40 | Answered: 0
Question No. 38
The solution set of the equation $\log_2 x + \log_2(2x-1) = 2\log_2(2-x)$ is
{1,-4}
{1}
{4,-1}
φ
B
Save & Next

Question No. 31

Evaluate $\lim_{x \to 9} \frac{\sqrt{x} - 3}{x - 9} =$

- $-\frac{1}{4}$
- $-\frac{1}{6}$
- $\frac{1}{2}$
- $\frac{1}{6}$

D

Save & Next

MKCL OES

Total questions in exam: **40** | Answered: 0

Question No. 37

If $\sin\theta = \frac{4}{5}$ then $\cos\theta =$,where $0° < \theta < 90°$

- $\frac{4}{5}$
- $\frac{3}{5}$
- $\frac{5}{4}$
- $\frac{5}{3}$

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B

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MKCL OES

Total questions in exam: 40 | Answered: 0

Question No. 36

The solution set of the equation $(\sqrt{2})^{3-5x} = 4^{a+x}$ is

- $\{\frac{1}{2} - \frac{1}{6}a\}$
- $\{\frac{3}{2} - \frac{2}{7}a\}$
- $\{\frac{1}{3} - \frac{4}{9}a\}$
- $\{3 + \frac{4}{9}a\}$

C

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MKCL OES

Total questions in exam: **40** | Answered: 0

Question No. 40

The graph of $f(x) = 3^x$ is

- Increasing
- Constant
- Decreasing and Increasing
- Decreasing

A

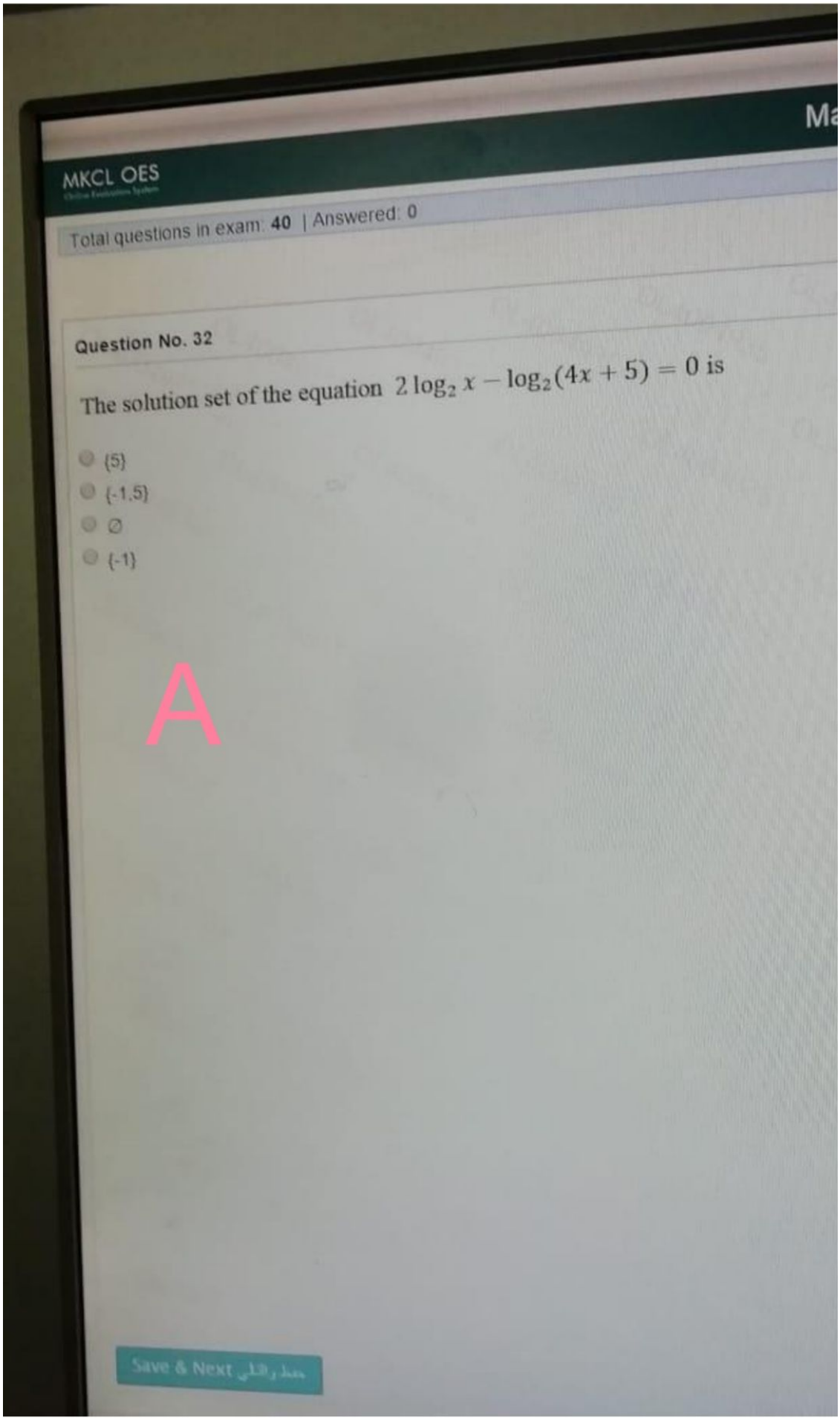
MKCL OES

Total questions in exam: **40** | Answered: **0**

Question No. 33

Give the slope of the line 4y - 8x + 28 = 0

- -2
- -7
- 2
- 7


MKCL OES
Total questions in exam: 40 | Answered: 0
Question No. 32
The solution set of the equation $2\log_2 x - \log_2(4x+5) = 0$ is
{5}
{-1,5}
∅
{-1}
A
Save & Next

MKCL OES

Total questions in exam: **40** | Answered: **0**

Question No. 34

Evaluate $\lim_{x \to 1^+} \frac{x^2 - 1}{|x - 1|}$

- 2
- 6
- -2
- 1

A

Total questions in exam: **40** | Answered: 17

Question No. 4

What are the factors of this quadratic equation?$8x^2 - 6x - 5 = 0$

- $(4x - 5)(2x + 1)$
- $(8x + 5)(x - 1)$
- $(4x - 1)(2x + 5)$
- $(x + 1)(8x - 5)$

A

Save & Next

Total questions in exam: **40** | Answered: **10**

Question No. 11

If $\sin\theta = \frac{4}{5}$ then $\cot\theta =$,where $0° < \theta < 90°$

- $\frac{4}{3}$
- $\frac{3}{5}$
- $\frac{5}{3}$
- $\frac{3}{4}$

D

Save & Next

MKCL OES

Question No. 39

If $\sin\theta = \frac{4}{5}$ then $\cot\theta =$

- $\frac{3}{4}$
- $\frac{4}{3}$
- $\frac{5}{3}$
- $\frac{3}{5}$

A

A

Save &

Question No. 22

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

- -1
- 0
- 1
- ∞

D

Save & Next حفظ والتالي

Question No. 16

Simplify $\left(\frac{-4n^6m^4}{m^2}\right)^{1/2}$ where $m \neq 0$

- $\frac{1}{8n^9m^3}$
- $-8n^9m^3$
- $-\frac{1}{8n^9m^3}$
- Is not a real number

D

Question No. 18

Evaluate the expression $\frac{-(-3)+(-5)^2}{2(-8)-3(-3)}$

- 4
- $-\frac{28}{25}$
- -4
- $\frac{28}{25}$

C

Question No. 23

The line through the point (-1,-3) with slope equal to zero is

- x = -3
- x = -1
- y = -3
- y = -1

C

Question No. 26

The inverse of F = { (-3,3), (0,0), (4,2), (1,5) } is

- G = { (-3,-3), (0,0), (4,-2), (1,-5) }
- G = { (3,3), (0,0), (-4,2), (-1,5) }
- G = { (3,3), (0,0), (2,4), (1,5) }
- G = { (3,-3), (0,0), (2,4), (5,1) }

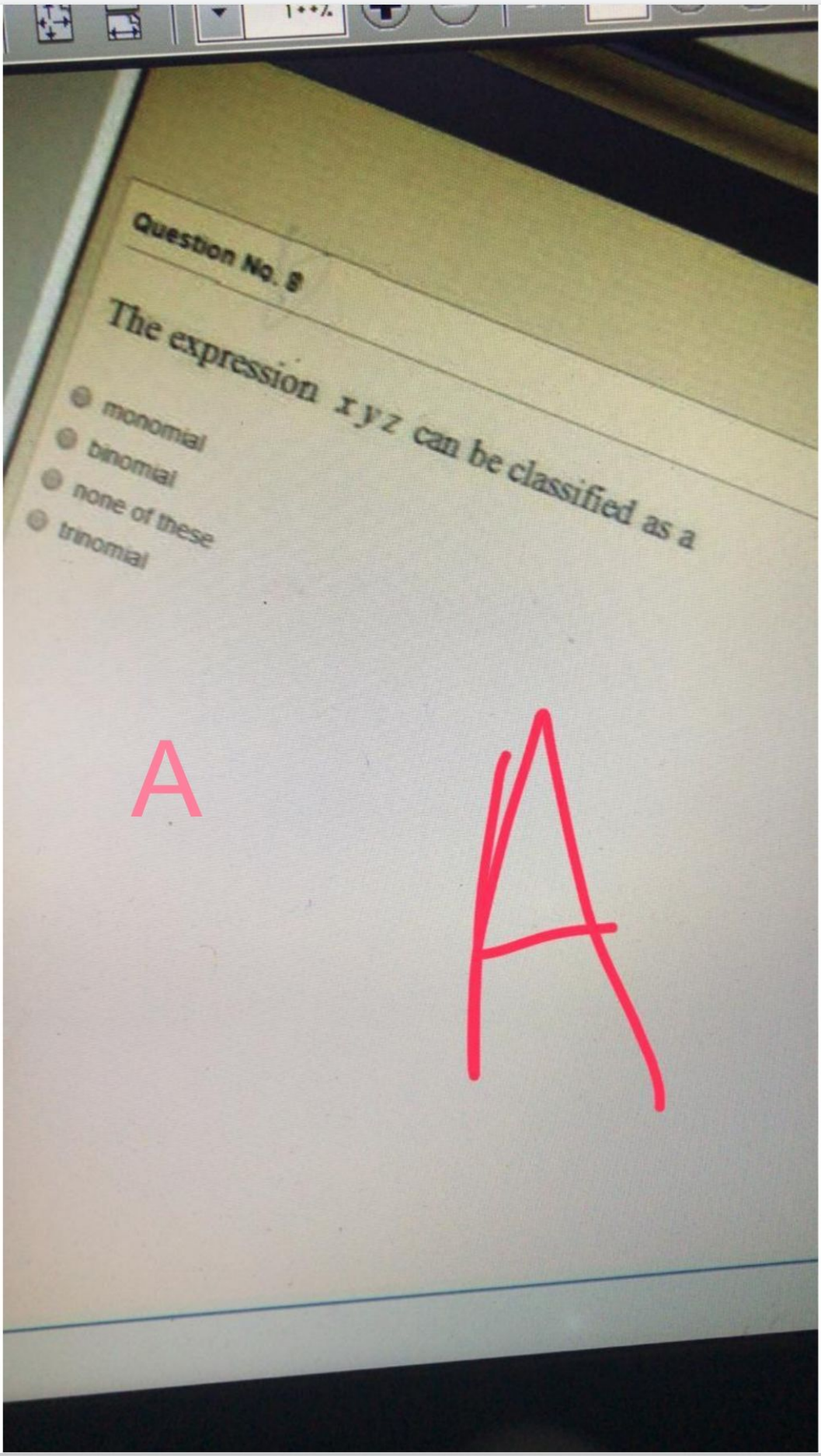
D

Question No. 34

Find the sum $\frac{3}{2y} - \frac{5}{2y}$

- $\frac{1}{y}$
- $\frac{1}{4y}$
- $-\frac{1}{y}$
- $\frac{11}{4y^2}$

C



MKCL OES

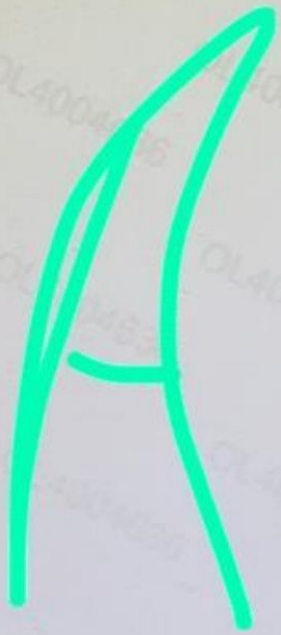
Total questions in exam: 40 | Answered: 23

Question No. 24

Let $x \in \mathbb{Z}$. Simplify the following expression $a = 3i^{132x^2+4x-3}$

- $a = 3i$
- $a = -3i$
- $a = -3$
- $a = 3$

A



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Question No. 33

If $f(x)=x^3+2x^2-1$ then $f(a^4)=$

- a^7+2a^6-1
- $a+2a^{-1}-1$
- $a^{12}+2a^8-1$
- a^9-1

C

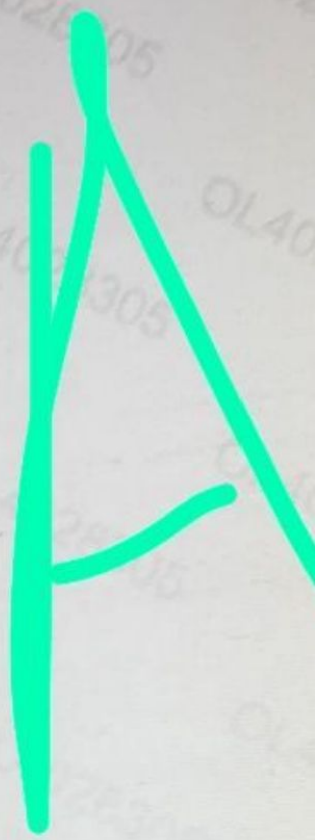
Total questions in exam: 40 | Answered: 0

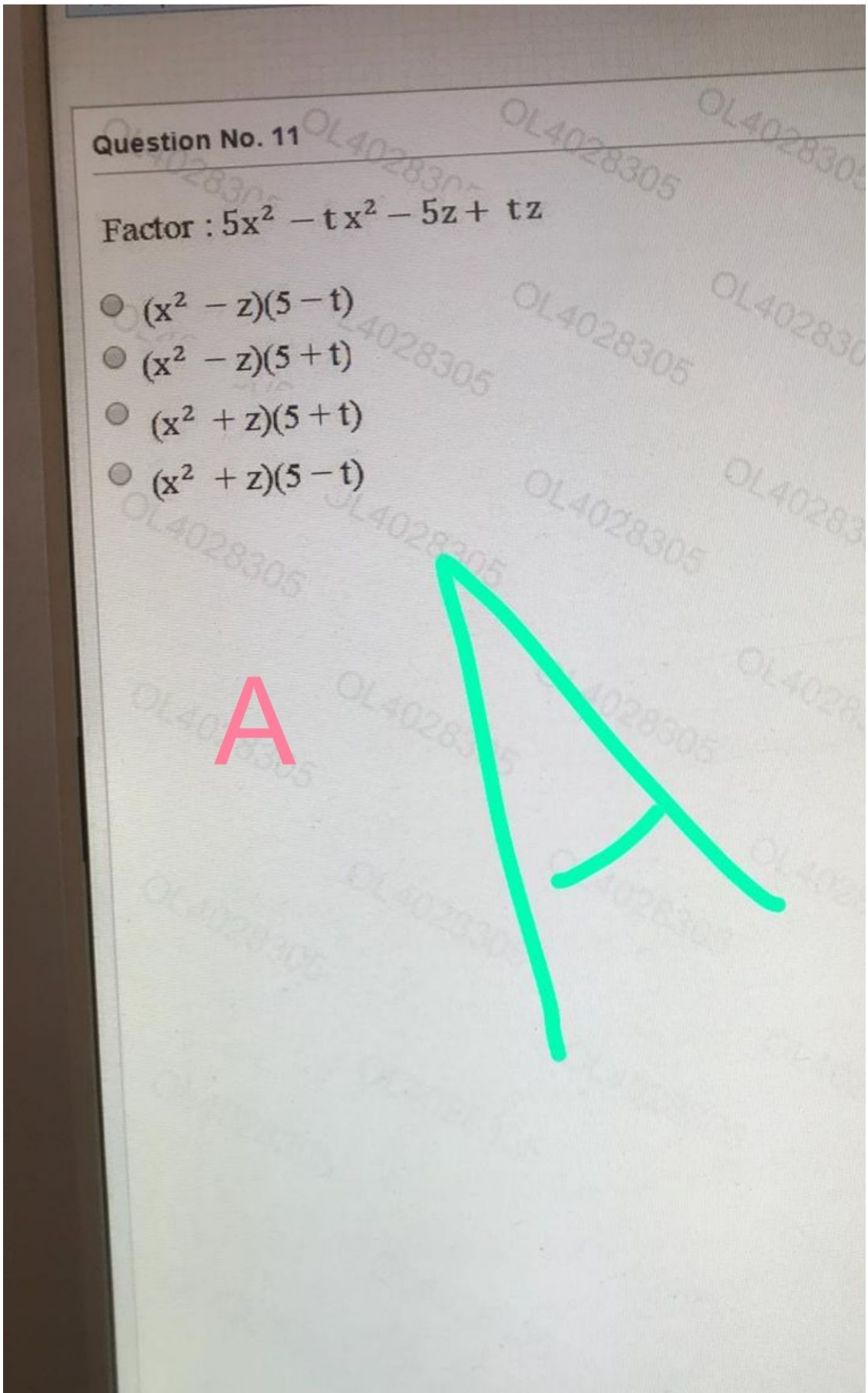
Question No. 6

Simplify $\left(x^{\frac{1}{2}}-3\right)\left(x^{\frac{1}{2}}+3\right)$

- $x-9$
- $x+9$
- $x-3$
- $x+3$

A



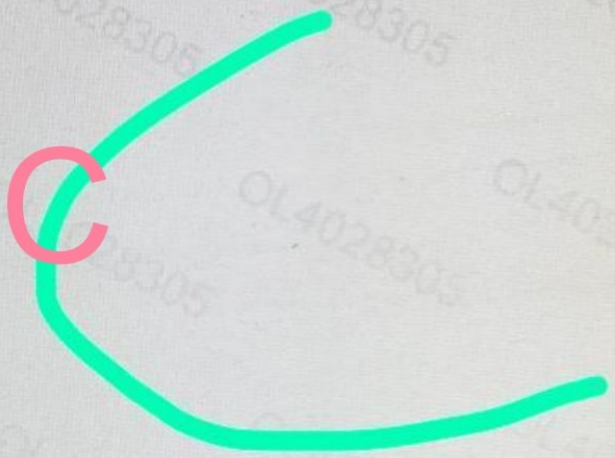

Question No. 11
Factor : $5x^2 - tx^2 - 5z + tz$
$(x^2 - z)(5 - t)$
$(x^2 - z)(5 + t)$
$(x^2 + z)(5 + t)$
$(x^2 + z)(5 - t)$
A

Total questions in exam: **40** | Answered: **0**

Question No. 8

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

- -4
- 3
- 1
- 0



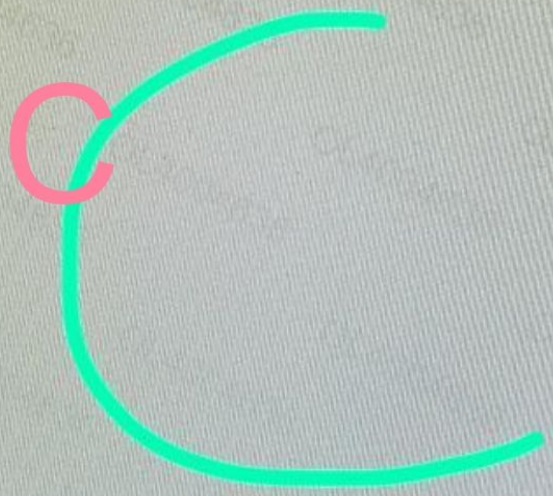
MKCL OES

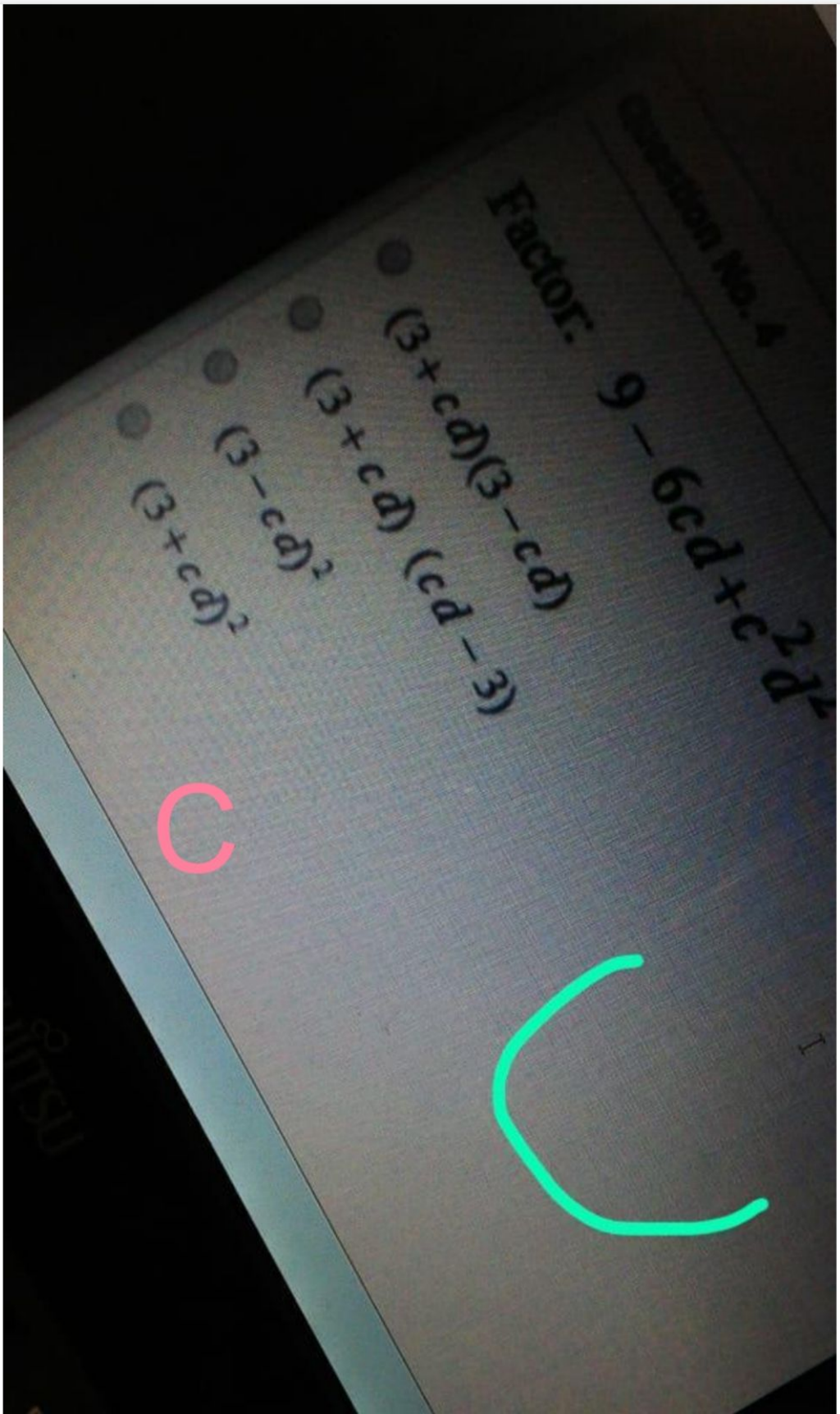
Total questions in exam: 40 | Answered: 22

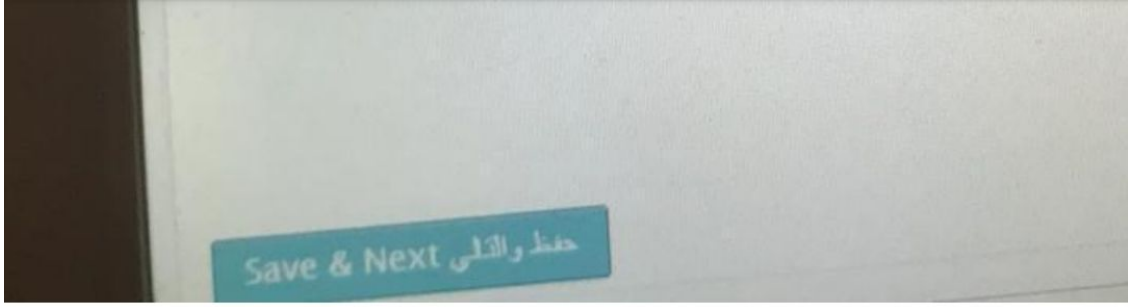
Question No. 23

Let $f(x) = -\frac{3}{2}x + 4$, find the value of a such that $f(2a) = 7$.

- a = 0.
- a = 1.
- a = −1.
- a = 2.




Question No. 4
Factor: $9-6cd+c^2d^2$
$(3+cd)(3-cd)$
$(3+cd)(cd-3)$
$(3-cd)^2$
$(3+cd)^2$
C



MKCL OES

Total questions in exam: **40** | Answered: **0**

Question No. 7

The degree of the polynomial $5x^2+3x-52$ is

- 5
- 3
- 2
- 52

C

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MKCL OES

Total questions in exam: 40 | Answered: 0

Question No. 5

The horizontal asymptote to the graph of $f(x) = 3^{x-1} + 2$.

- y = 2
- x = -2
- y = 3
- y = -2

A

MKCL OES

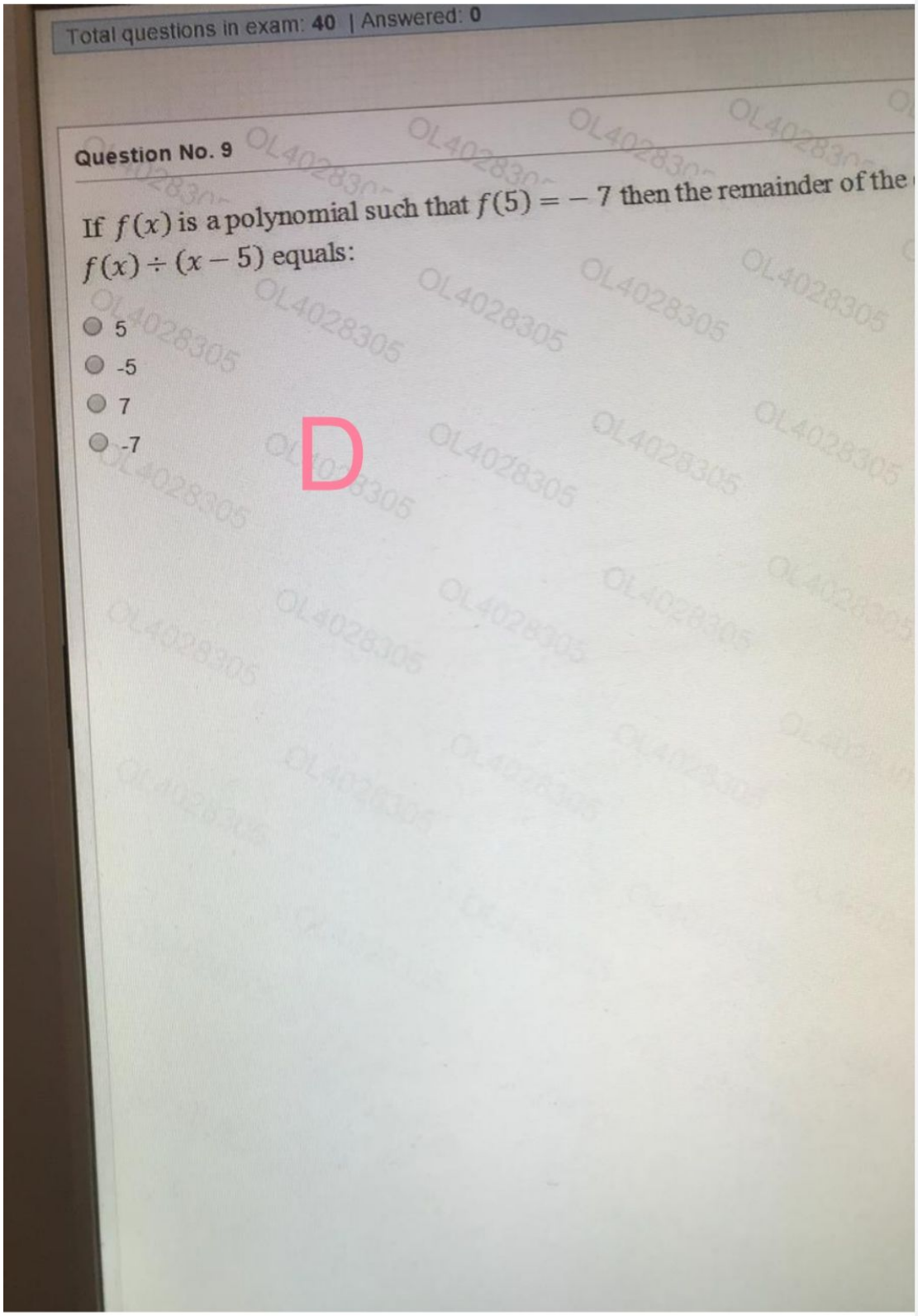
Total questions in exam: **40** | Answered: **0**

Question No. 3

The solution set of $-2 \leq 3 - 5x \leq 18$ is

- $(-\infty, 1)$
- $(-3, \infty)$
- $(-3, 1)$
- $[-3, 1]$

D


Total questions in exam: 40 | Answered: 0
Question No. 9
If $f(x)$ is a polynomial such that $f(5) = -7$ then the remainder of the
$f(x) \div (x-5)$ equals:
5
-5
7
-7
D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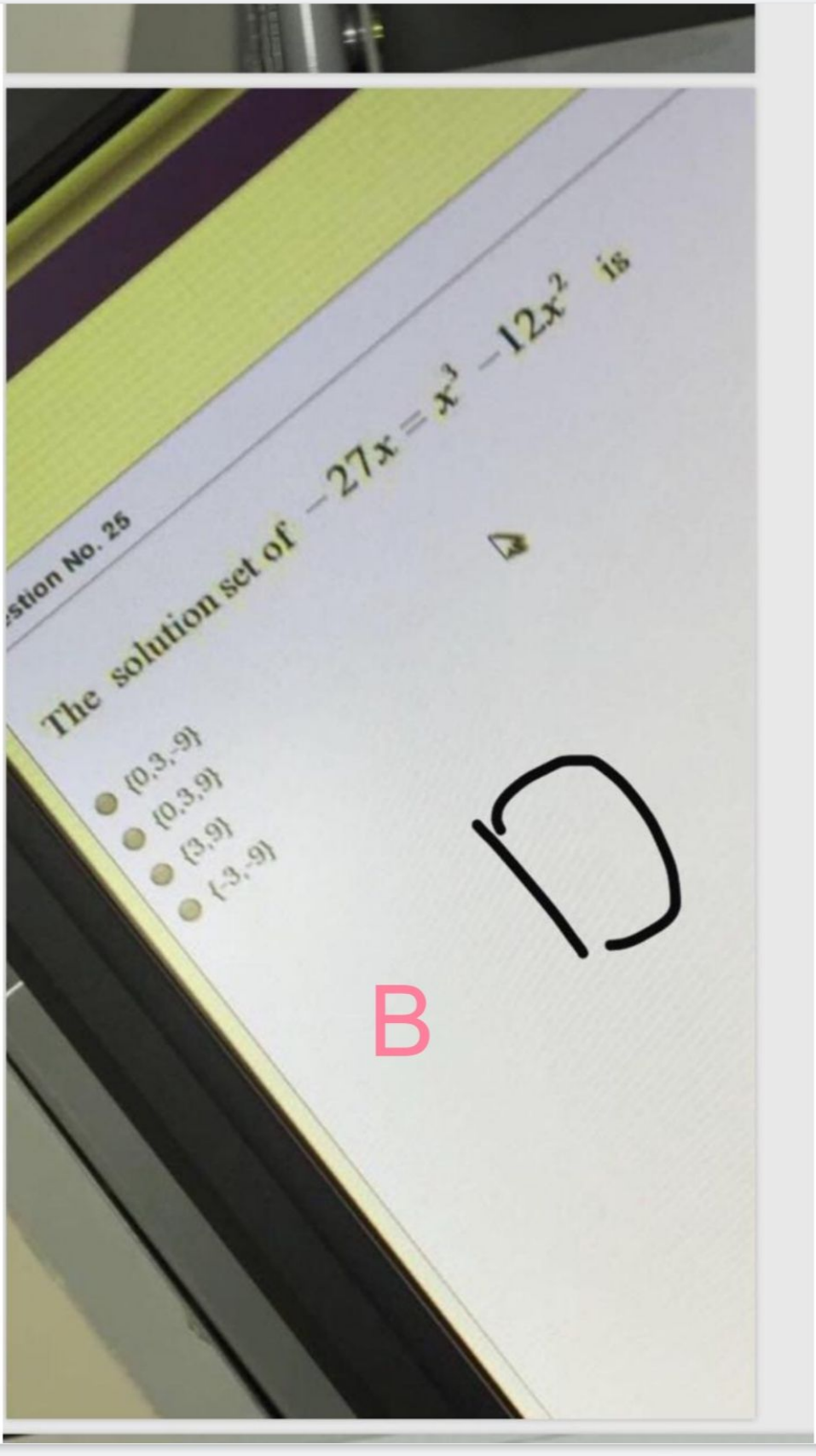
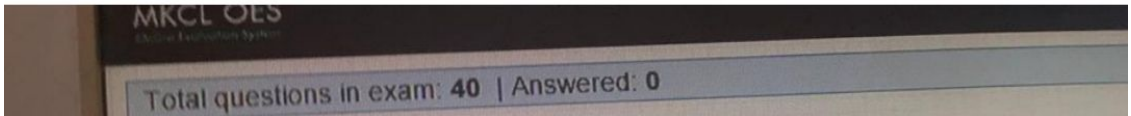

stion No. 25
The solution set of $-27x = x^3 - 12x^2$ is
{0,3,-9}
{0,3,9}
{3,9}
{-3,-9}
B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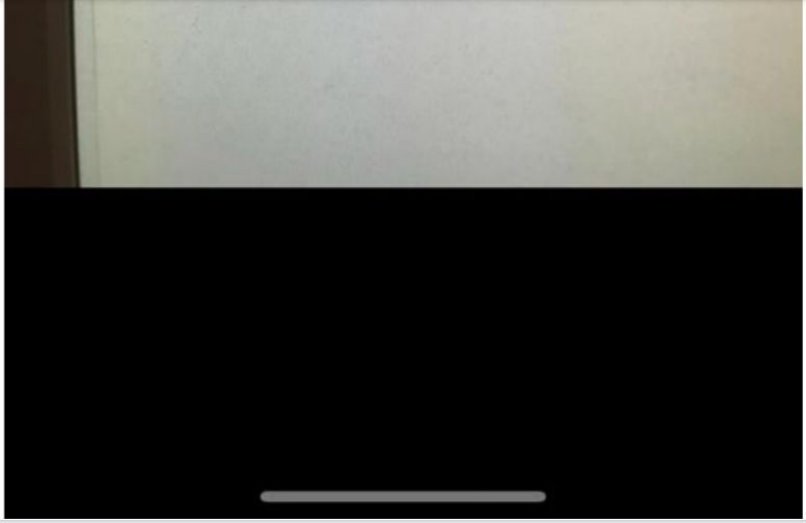
Total questions in exam: 40 | Answered: 0



Total questions in exam: 40 | Answered: 0

Question No. 25

Given that $f(x) = \log_{\frac{1}{2}}(x+2)$, then $f(2) =$

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

D

Question No. 13

Use the square root property to solve this quadratic equation

$$x^2 + 20 = 4$$

- $\pm 4i$
- $\sqrt{16}$
- -4
- $\pm\sqrt{24}$

A

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Question No. 1

The solution of the equation $\ln(3x) = 2$ is

- e^2
- $\frac{e^3}{2}$
- $3e^2$
- $\frac{e^2}{3}$

D

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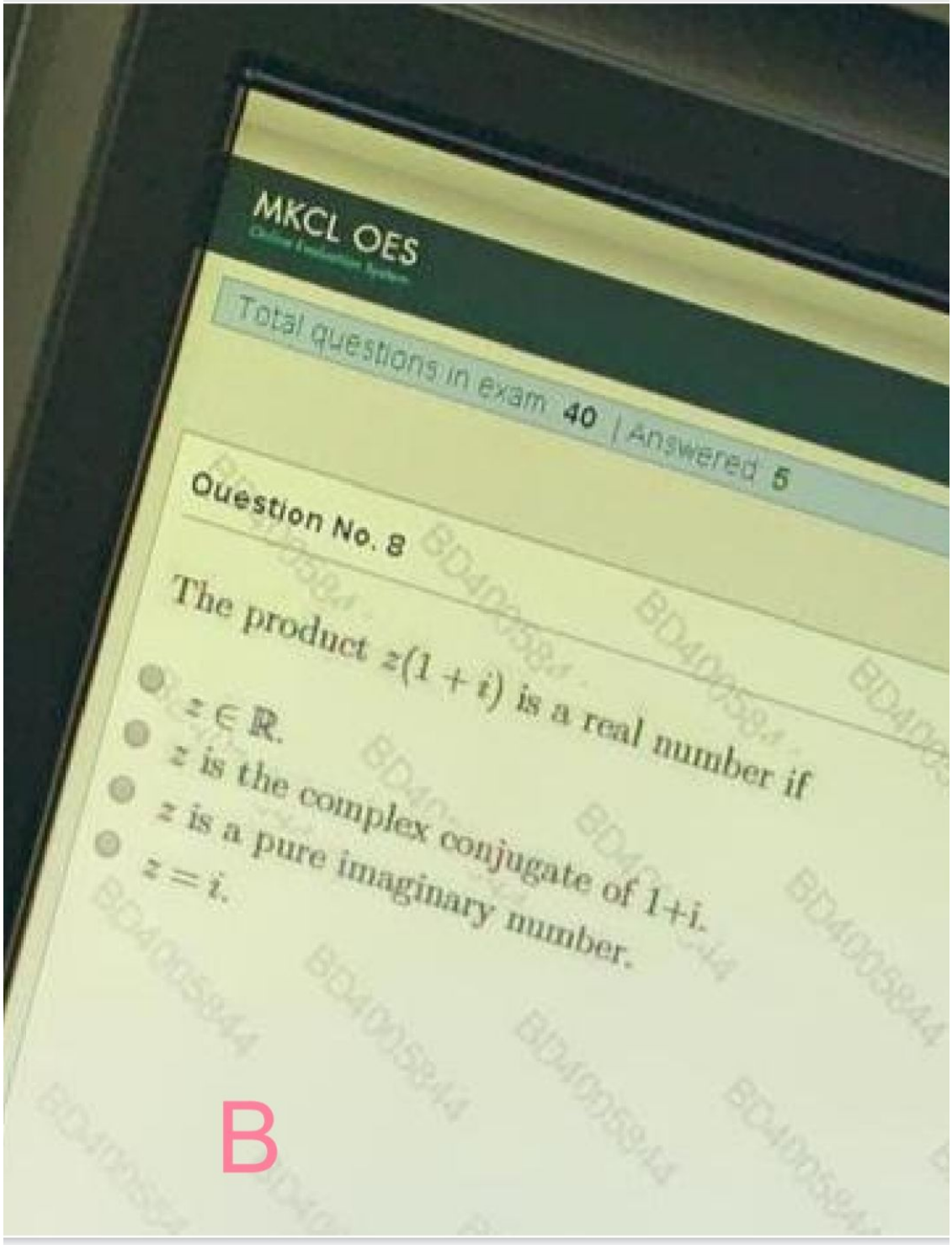

MKCL OES
Total questions in exam 40 | Answered 5
Question No. 8
The product $z(1+i)$ is a real number if
$z \in \mathbb{R}$.
z is the complex conjugate of $1+i$.
z is a pure imaginary number.
$z = i$.
B

MKCL OES

Total questions in exam: **40** | Answered: **17**

Question No. 18

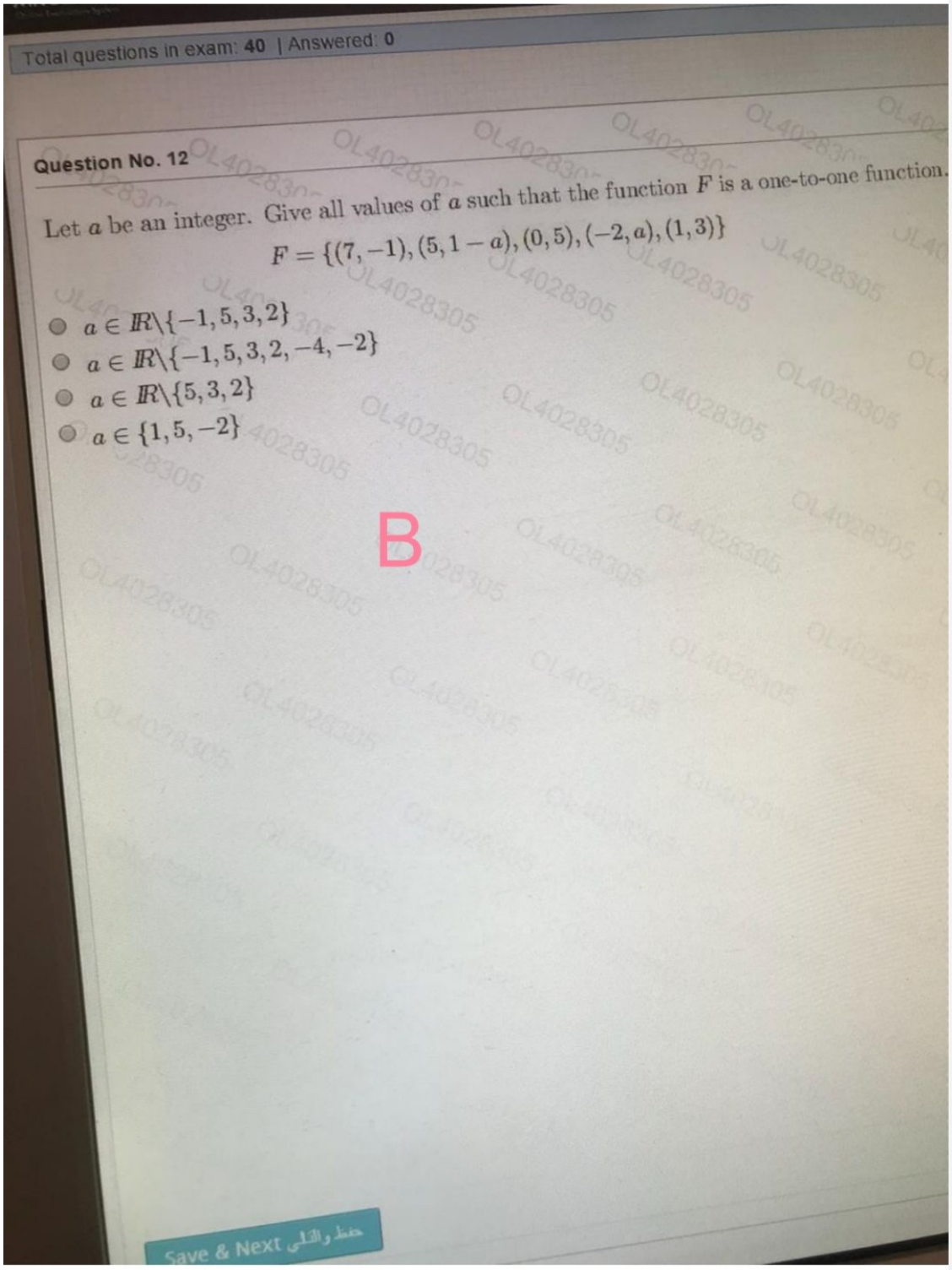
Which of the following is a pair of inverse functions?

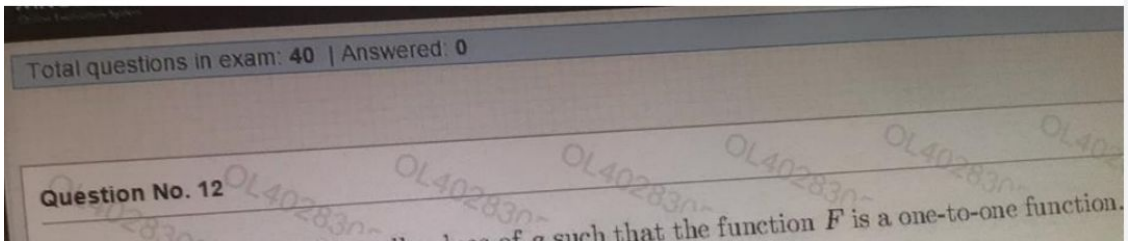
- $f(x) = 2x - 1$, *where* $x \in \mathbb{R}$, and $g(x) = x + \frac{1}{2}$, *where* $x \in \mathbb{R}$.
- $f(x) = \sqrt{3+x}$, *where* $x \in [-3, \infty)$, and $g(x) = x^2 - 3$, *where* $x \in [0, \infty)$.
- $f(x) = x$, *where* $x \in \mathbb{R}$, and $g(x) = -x$, *where* $x \in \mathbb{R}$.
- $f(x) = \sqrt{3+x}$, *where* $x \in [-3, \infty)$, and $g(x) = x^2 + 3$, *where* $x \in [0, \infty)$.

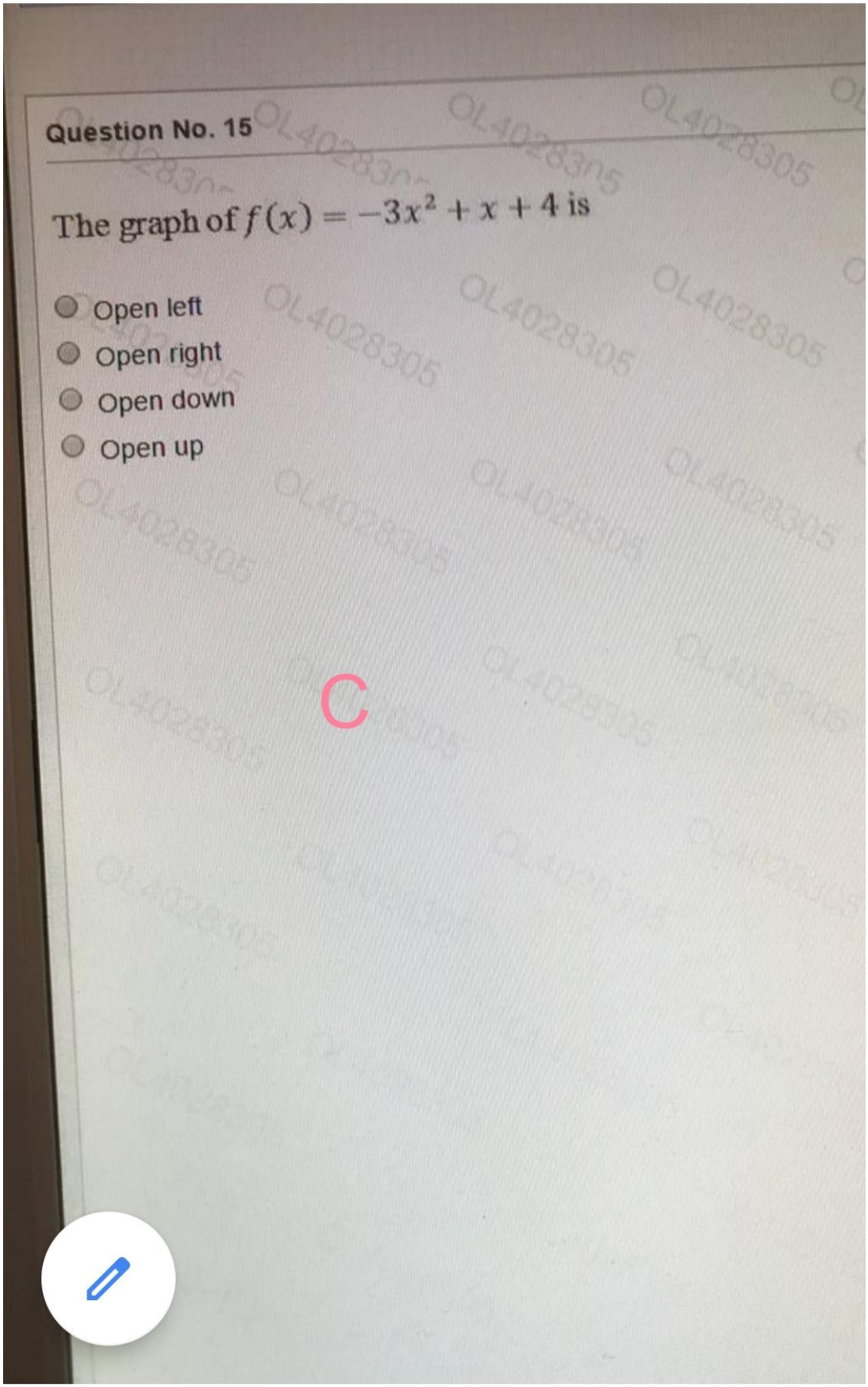
B

Save & Next

HP Compaq LE1711


Total questions in exam: 40 | Answered: 0
Question No. 12
Let a be an integer. Give all values of a such that the function F is a one-to-one function.
$F = \{(7,-1),(5,1-a),(0,5),(-2,a),(1,3)\}$
$a \in \mathbb{R}\backslash\{-1,5,3,2\}$
$a \in \mathbb{R}\backslash\{-1,5,3,2,-4,-2\}$
$a \in \mathbb{R}\backslash\{5,3,2\}$
$a \in \{1,5,-2\}$
B
Save & Next حفظ والتالي

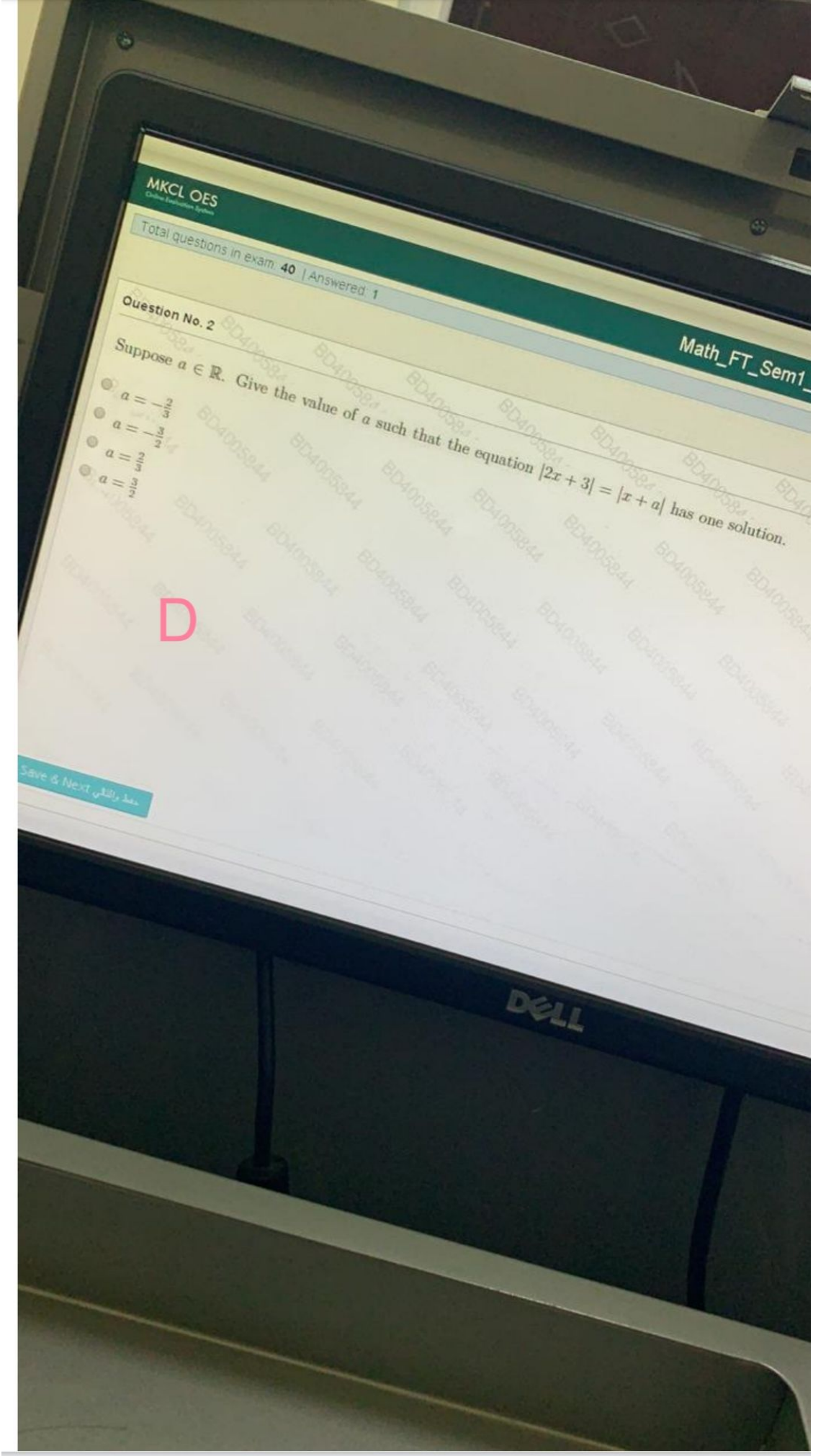

Total questions in exam: 40 | Answered: 0
Question No. 12
such that the function F is a one-to-one function.



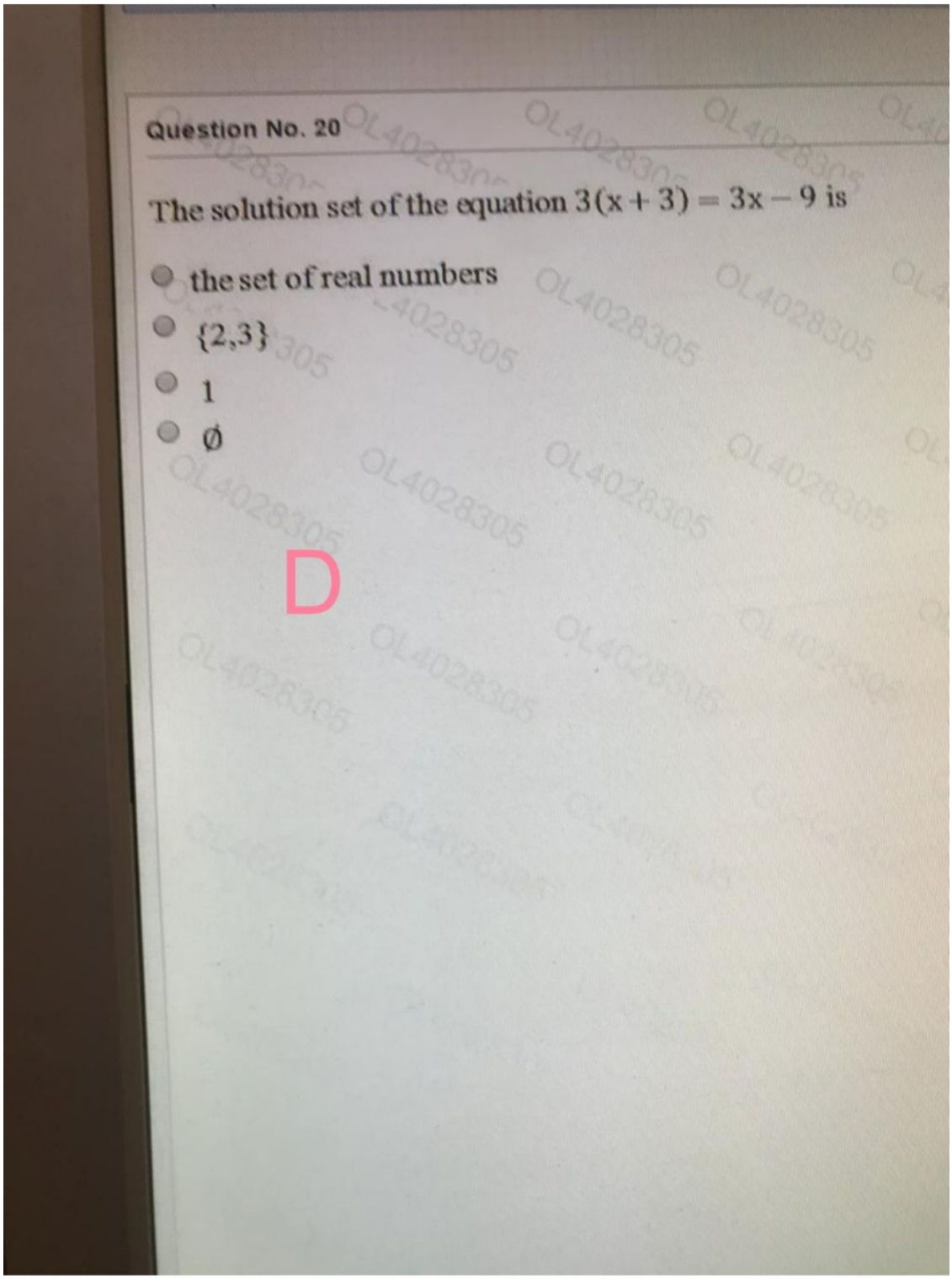
Question No. 15

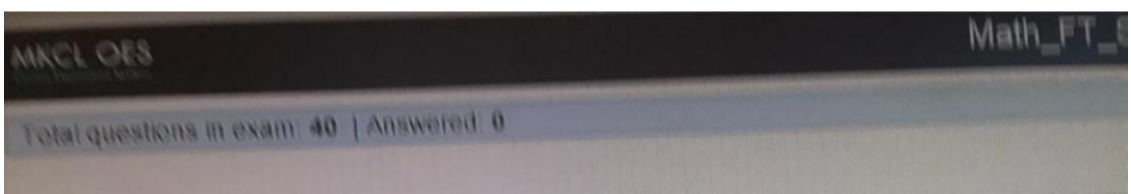
The graph of $f(x) = -3x^2 + x + 4$ is

- Open left
- Open right
- Open down
- Open up


MKCL OES
Total questions in exam: 40 | Answered: 1
Question No. 2
Math_FT_Sem1_
Suppose $a \in \mathbb{R}$. Give the value of a such that the equation $|2x+3| = |x+a|$ has one solution.
$a = -\frac{2}{3}$
$a = -\frac{3}{2}$
$a = \frac{2}{3}$
$a = \frac{3}{2}$
D
Save & Next
DELL


otal questions in exam: 40 | Answered: 0


Question No. 20
The solution set of the equation 3(x + 3) = 3x − 9 is
the set of real numbers
{2,3}
1
Ø
D


MKCL OES
Math_FT_
Total questions in exam: 40 | Answered: 0

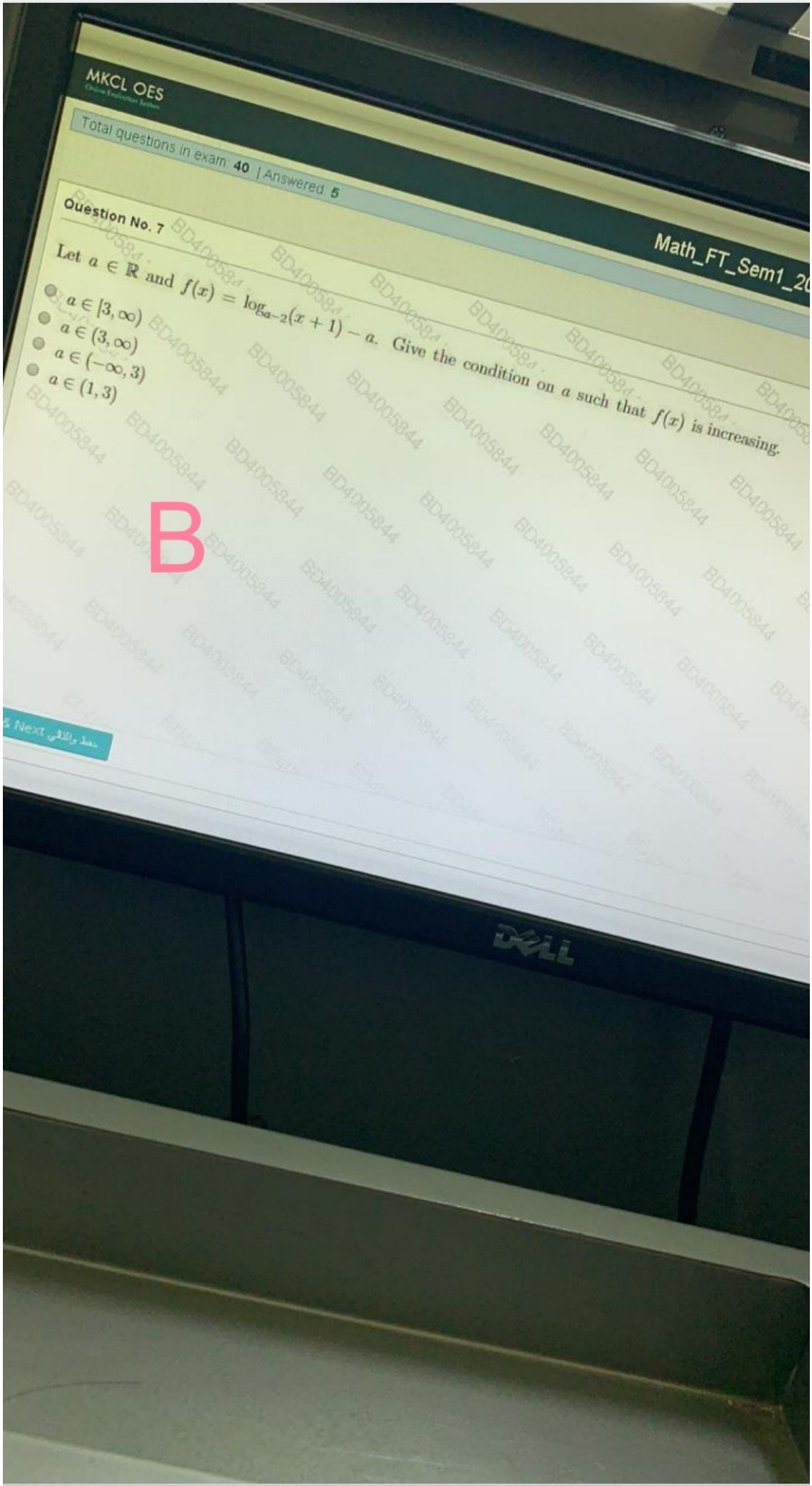
Total questions in exam: **40** | Answered: **0**

Question No. 24

If x-2 is a factor of the polynomial f(x) then

- $f(-2) = 0$
- $f(2) = 0$
- $f(0) = -2$
- $f(0) = 2$

B


MKCL OES
Total questions in exam: 40 | Answered: 5
Math_FT_Sem1_2
Question No. 7
Let $a \in \mathbb{R}$ and $f(x) = \log_{a-2}(x+1) - a$. Give the condition on a such that $f(x)$ is increasing.
$a \in [3, \infty)$
$a \in (3, \infty)$
$a \in (-\infty, 3)$
$a \in (1, 3)$
B
Next
DELL

MKCL OES
Online Evaluation System

Total questions in exam: **40** | Answered: **2**

Question No. 3

If x-4 is a factor of the polynomial f(x) then

- $f(-4) = 0$
- $f(0) = 4$
- $f(4) = 0$
- $f(0) = -4$

C

Next حفظ والتالي

Question No. 2

Evaluate $\lim_{x \to 1} (x^3 + x - 6) =$

- -4
- 4
- 0
- -6

A

Save & Next حفظ والتالي

MKCL OES

Total questions in exam: **40** | Answered: **6**

Question No. 7

The horizontal asymptote to the graph of $f(x) = 2^x - 3$.

- y = -3
- x = -2
- y = 3
- x = 2

A

Save & Next حفظ والتالي

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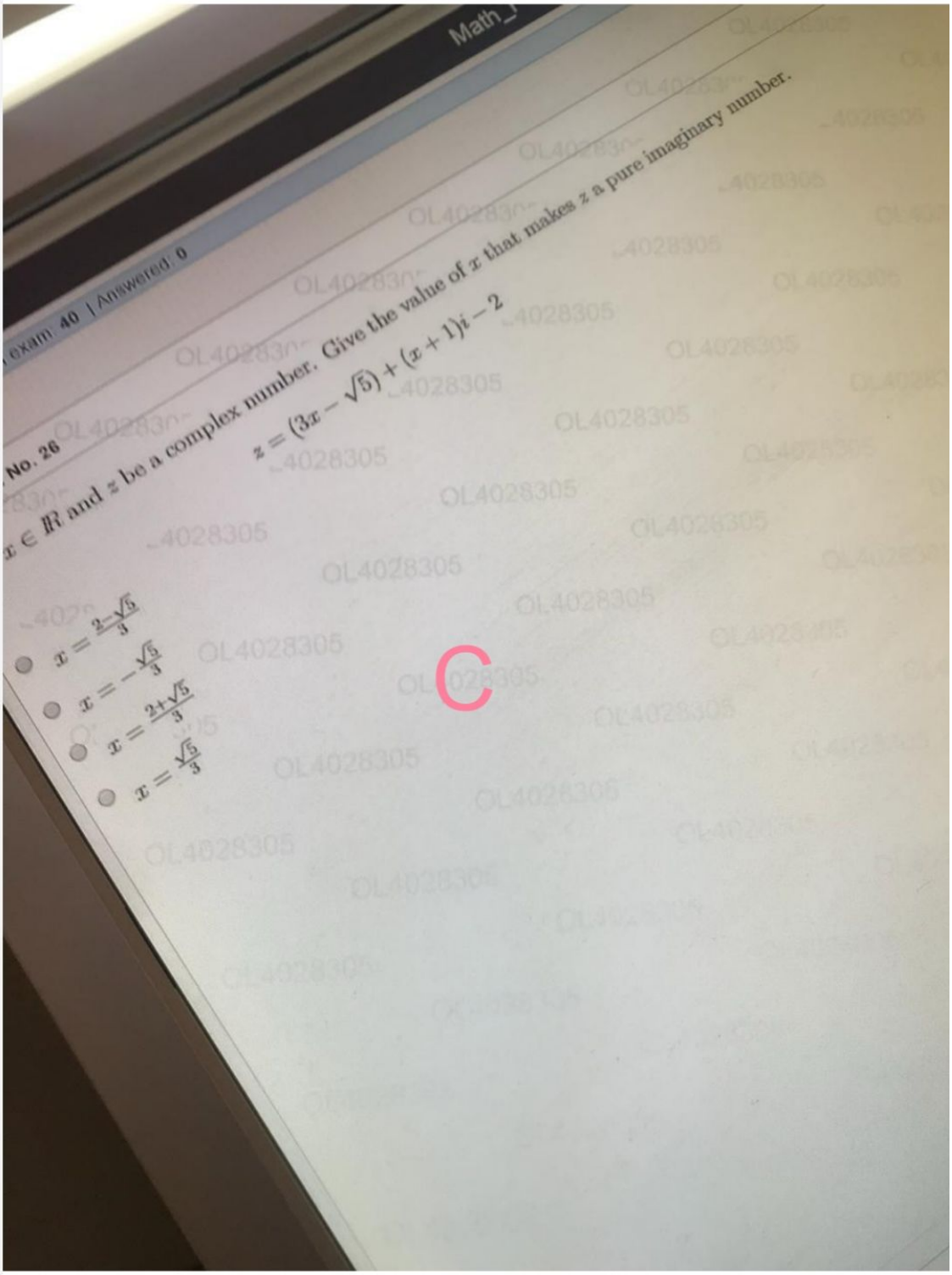
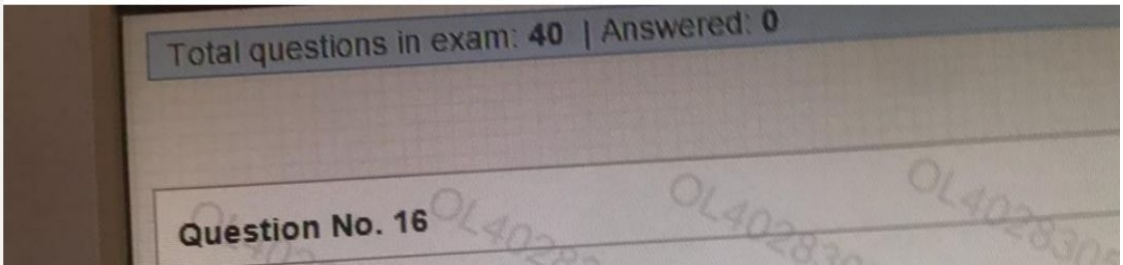
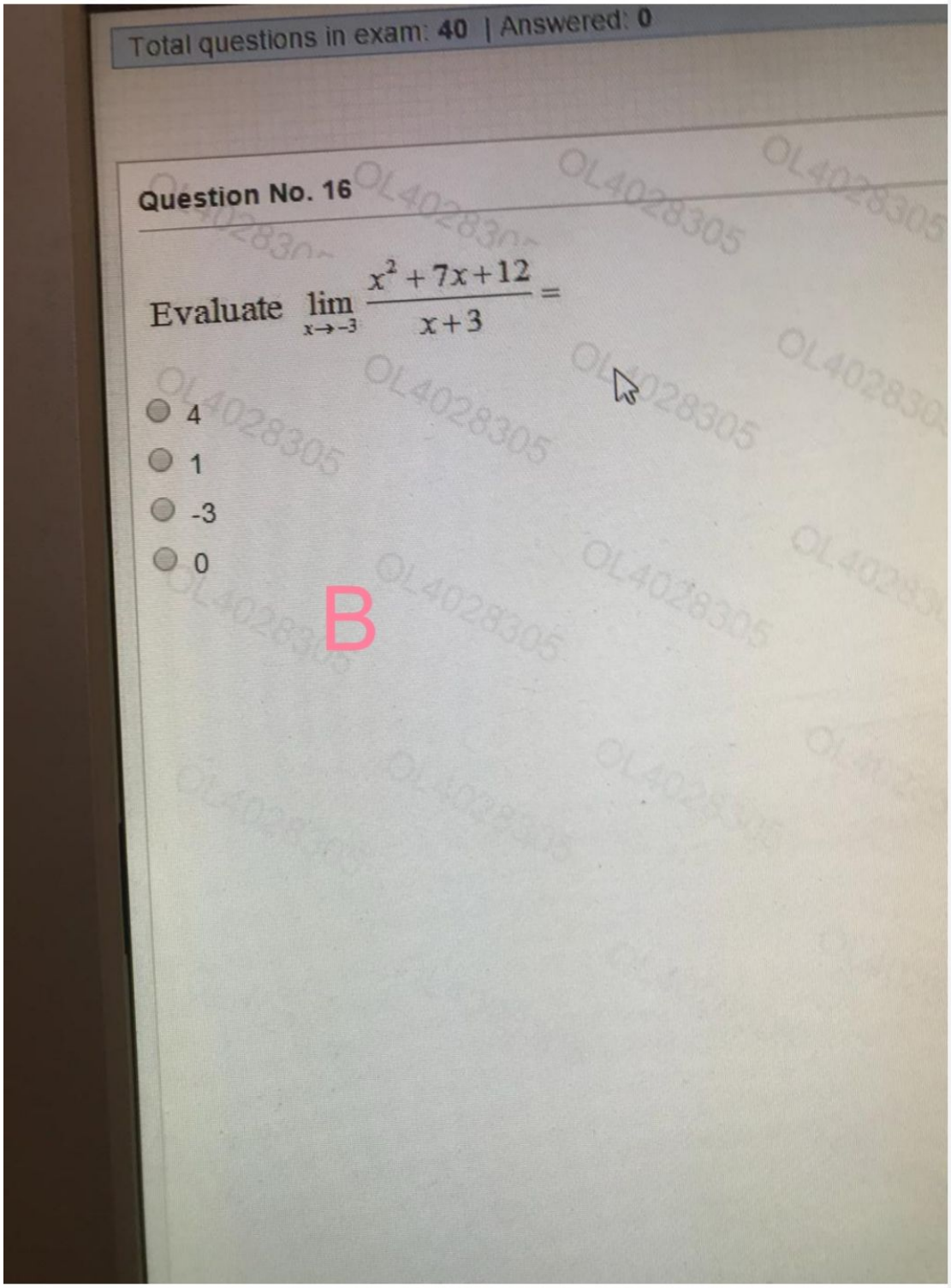

Math_
exam: 40 | Answered: 0
No. 26
$x \in \mathbb{R}$ and z be a complex number. Give the value of x that makes z a pure imaginary number.
$z = (3x - \sqrt{5}) + (x + 1)i - 2$
$x = \frac{2-\sqrt{5}}{3}$
$x = -\frac{\sqrt{5}}{3}$
$x = \frac{2+\sqrt{5}}{3}$
$x = \frac{\sqrt{5}}{3}$


Total questions in exam: 40 | Answered: 0
Question No. 16


Total questions in exam: 40 | Answered: 0
Question No. 16
Evaluate $\lim_{x \to -3} \frac{x^2+7x+12}{x+3} =$
4
1
-3
0
B

MKCL OES

Math_

Total questions in exam: **40** | Answered: **4**

Question No. 5

Let f be the one-to-one function defined by this set of ordered pairs $\{(-3,2), (4,5),(7,4),(10,19)\}$. Then $f^{-1}(5) =$

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

A

Save & Next

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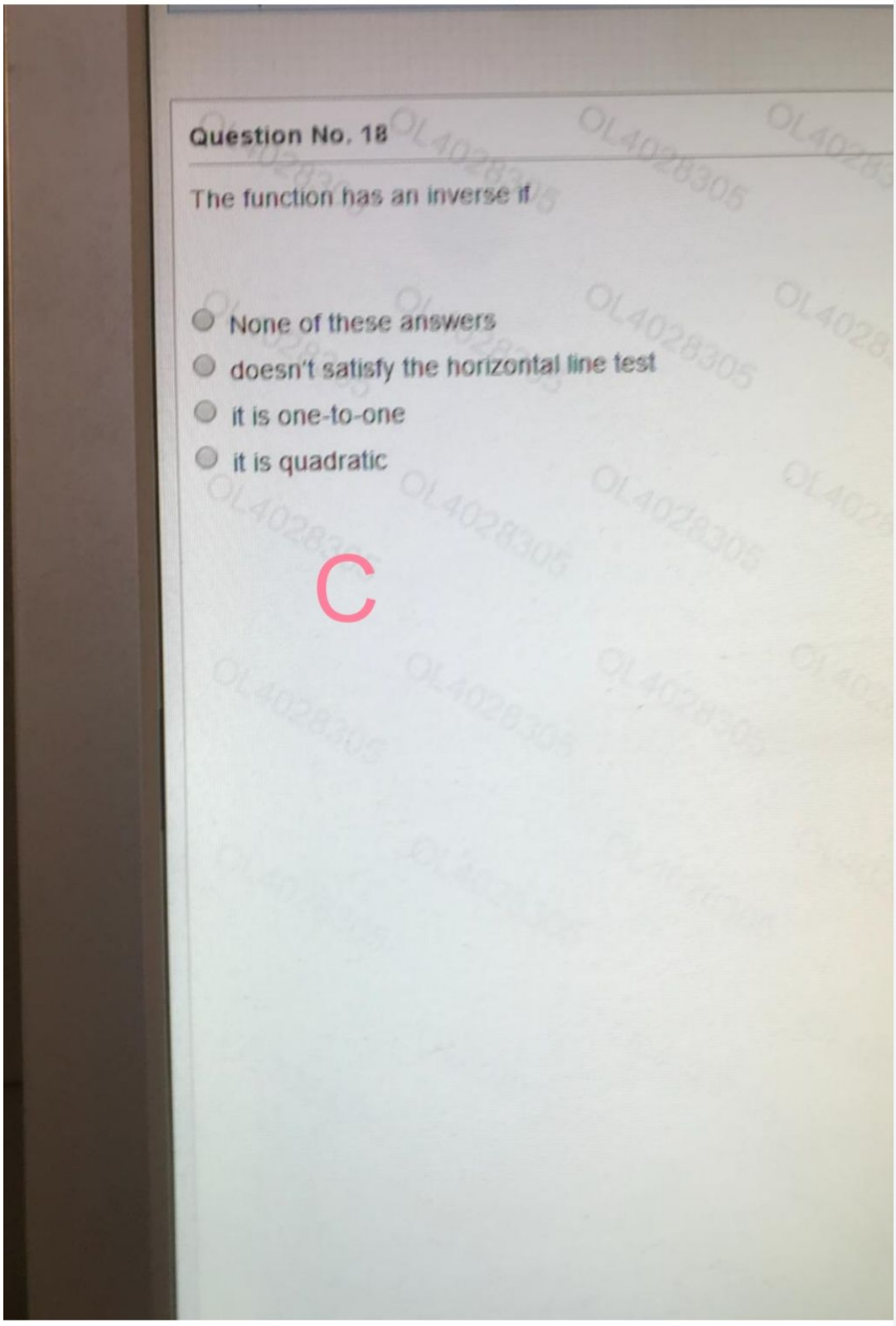
Total questions in exam: 40 | Answered: 0

Question No. 17

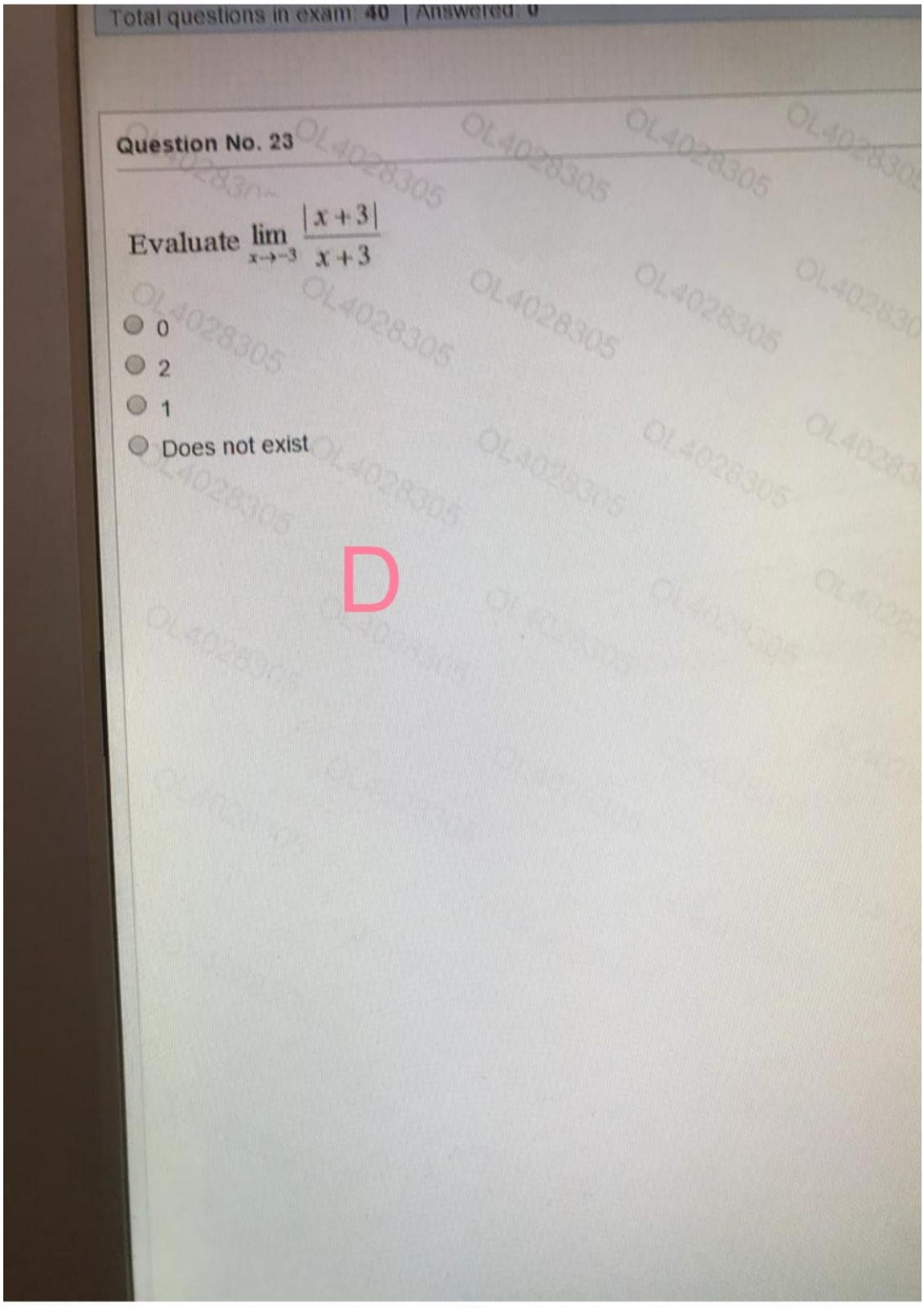
The domain of the function $f(x) = e^{x^2-3x+1} - 2$ is:

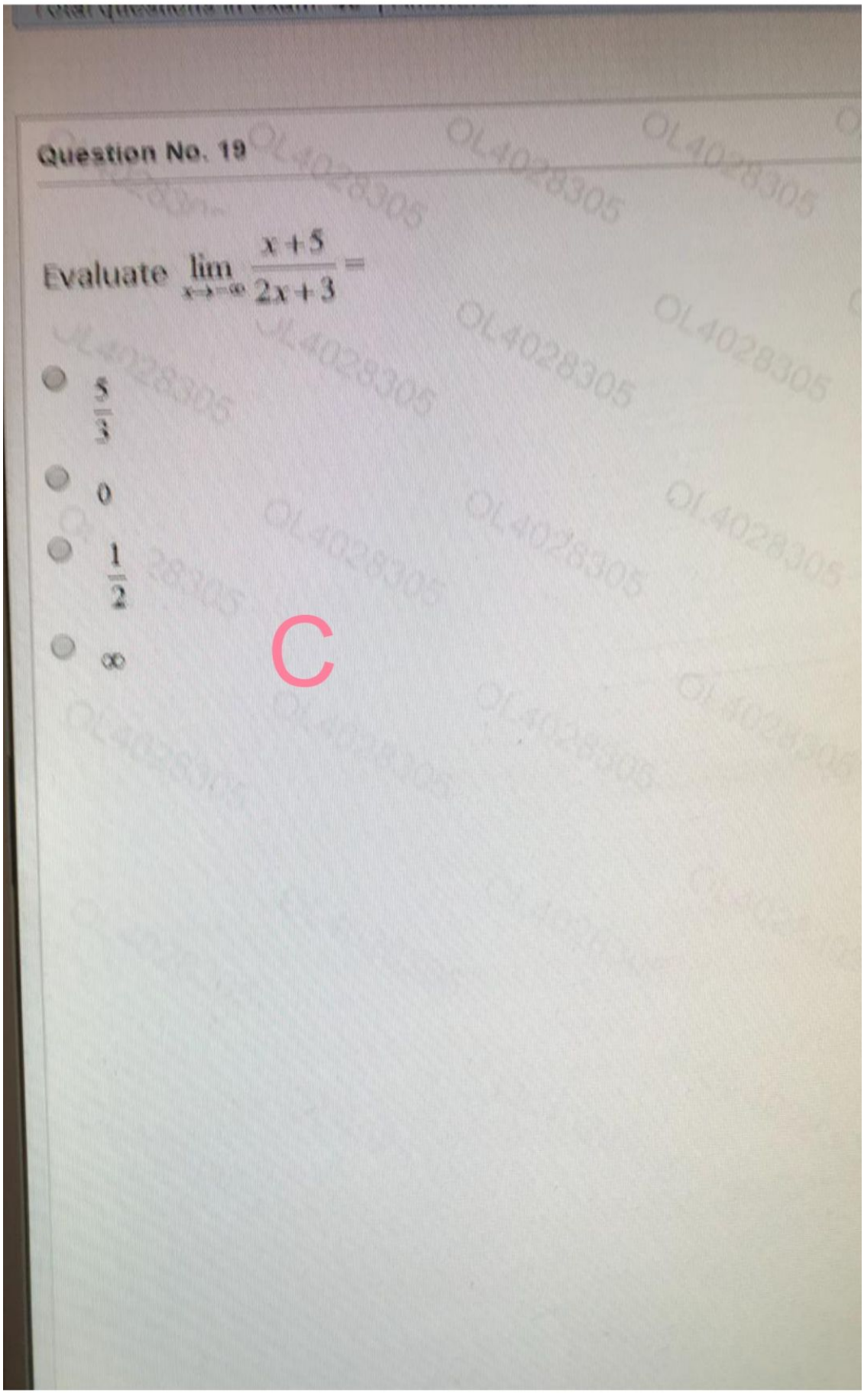
- $\mathbb{R}$
- $(0, \infty)$
- $(-1, \infty)$
- $(-\infty, 0)$

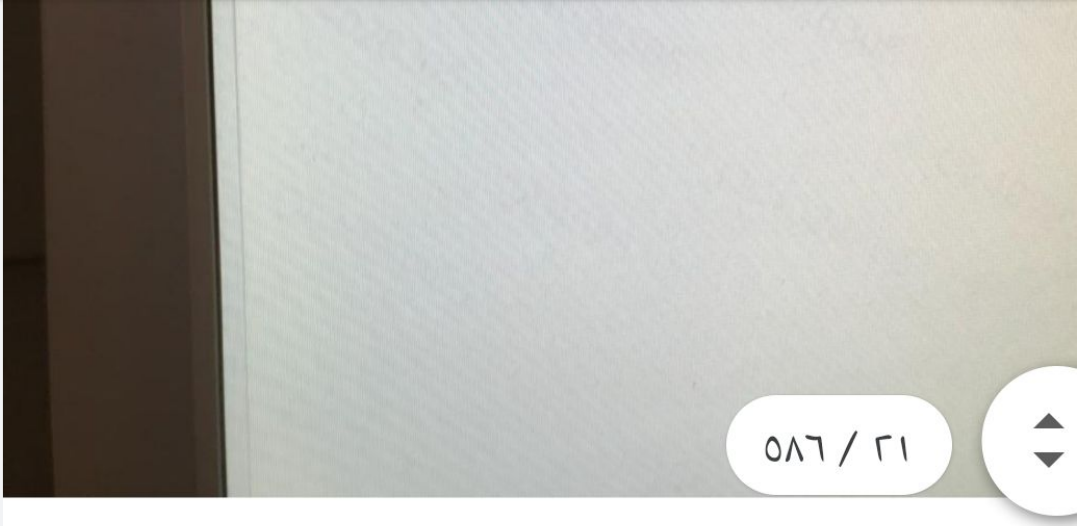
A



Question No. 18


Total questions in exam: 40 | Answered: 0
Question No. 23
Evaluate $\lim_{x \to -3} \frac{|x+3|}{x+3}$
0
2
1
Does not exist
D


Question No. 19
Evaluate $\lim_{x \to -\infty} \frac{x+5}{2x+3} =$
$\frac{5}{3}$
0
$\frac{1}{2}$
∞
C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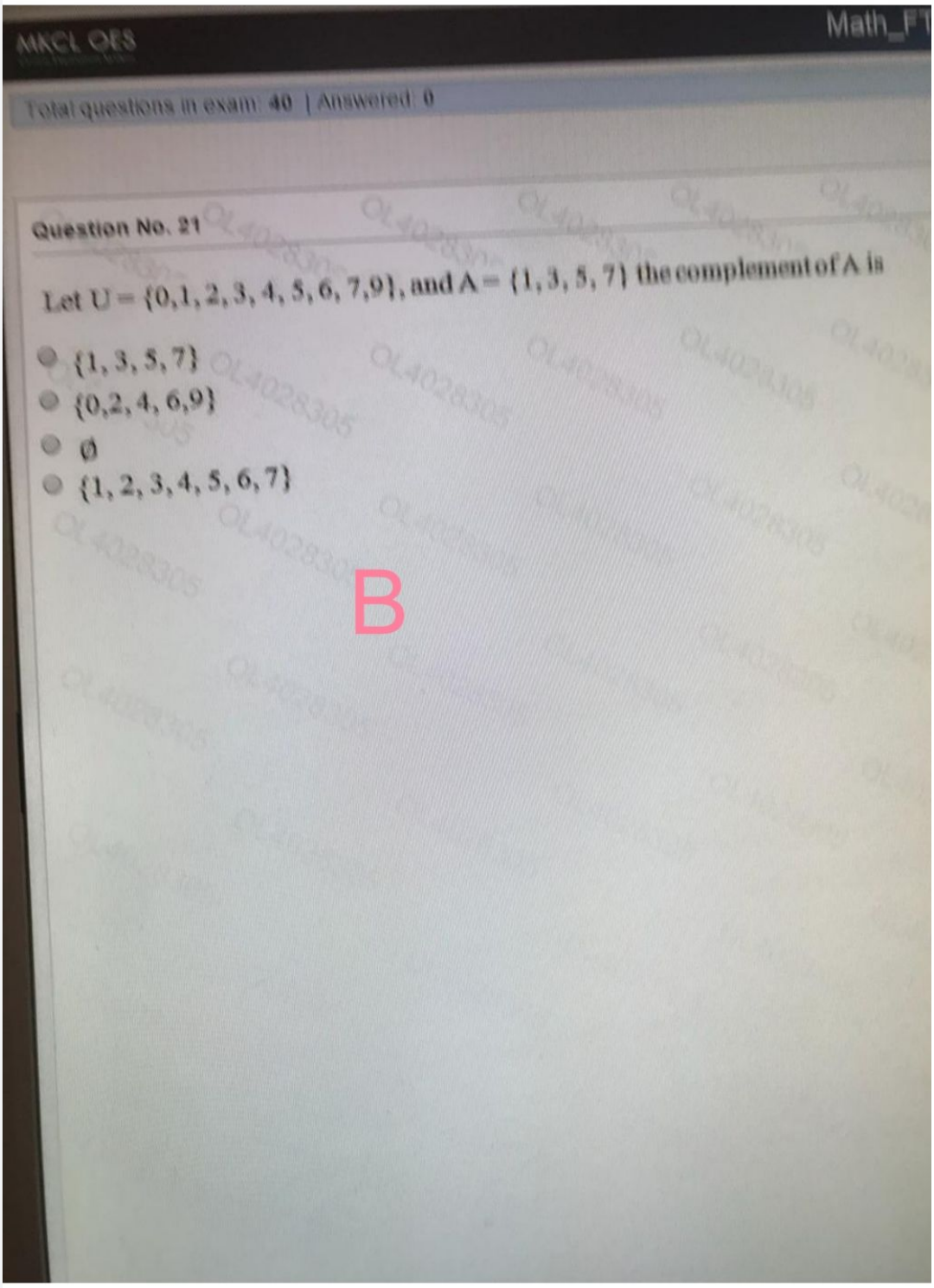

MKCL OES
Math_F
Total questions in exam: 40 | Answered: 0
Question No. 21
Let U = {0,1, 2, 3, 4, 5, 6, 7,9}, and A = {1, 3, 5, 7} the complement of A is
{1, 3, 5, 7}
{0,2, 4, 6,9}
ø
{1, 2, 3, 4, 5, 6, 7}
B

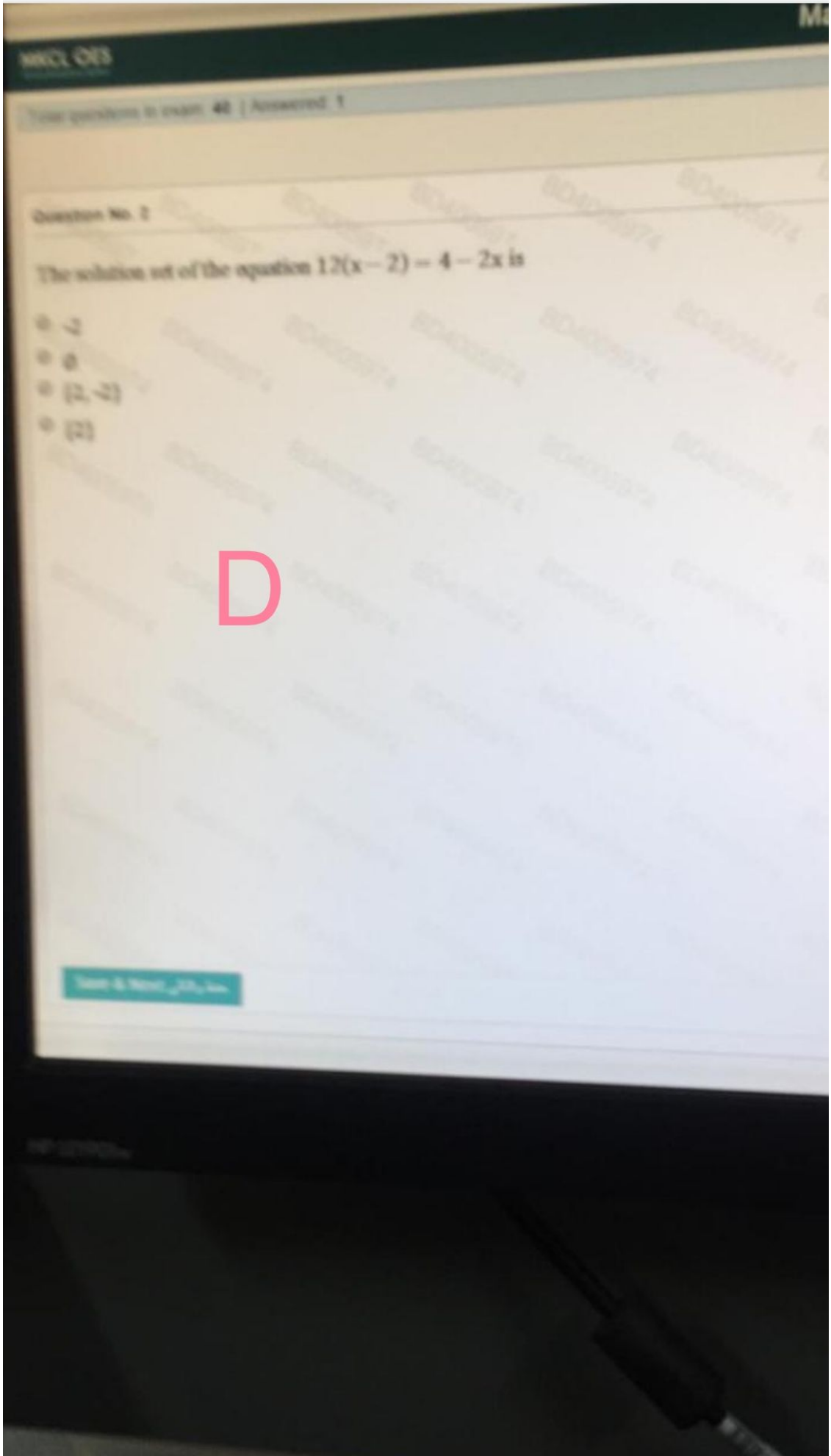
Total questions in exam: **40** | Answered: **0**

Question No. 22

The function $f(x)=\begin{cases} x^4 & \text{if } x\le 1 \\ k-x^4 & \text{if } x>1 \end{cases}$ is continuous if

- k=-1
- k=1
- k=0
- k=2

D


Question No. 2
The solution set of the equation 12(x − 2) = 4 − 2x is
-2
ϕ
{2, -2}
{2}
D

MKCL OES

Total questions in exam: **40** | Answered: **0**

Question No. 1

Perform the indicated operations $a\,b(a^{-1} - b^{-1})$,where $a \neq 0$, $b \neq 0$

- $b - a$
- $\frac{1}{b} - \frac{1}{a}$
- 0
- $a - b$

A

Save & Next جمع و اگلا

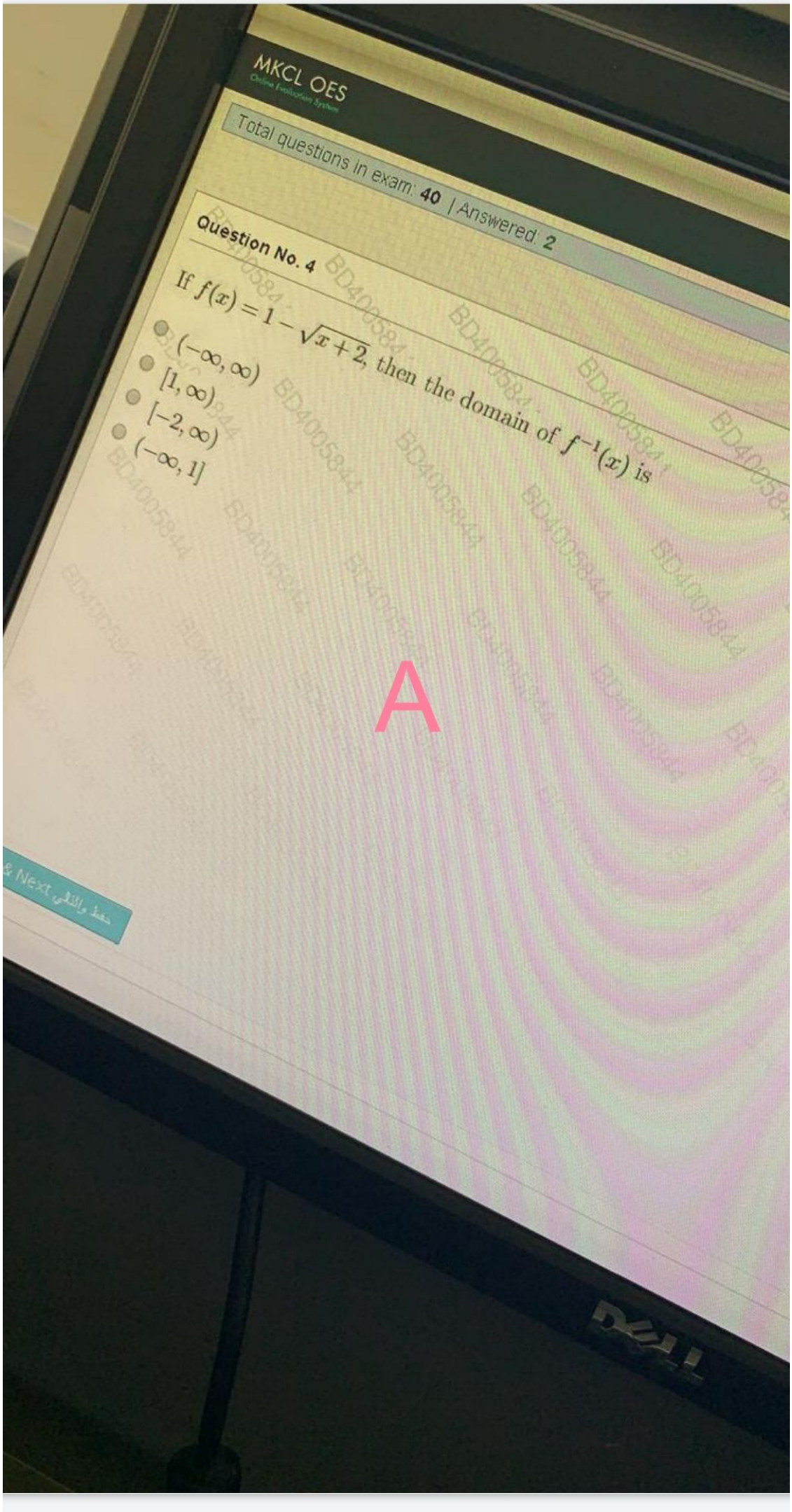
Compaq LE1711

Question No. 15

If $p(x)=\sqrt{x+3}$ and $q(x)=\sqrt{x-4}$. Determine the domain of $(p\cdot q)(x)$.

- $x \in (-\infty, -3) \cup (4, \infty)$
- $x \in [-3, 4]$
- $x \in [4, \infty)$
- $x \in (-3, 4)$

C


MKCL OES
Online Evaluation System
Total questions in exam: 40 | Answered: 2
Question No. 4
If $f(x) = 1 - \sqrt{x+2}$, then the domain of $f^{-1}(x)$ is
$(-\infty, \infty)$
$[1, \infty)$
$[-2, \infty)$
$(-\infty, 1]$
A
Next
DELL

MKCL OES

Total questions in exam: **40** | Answered: 7

Question No. 8

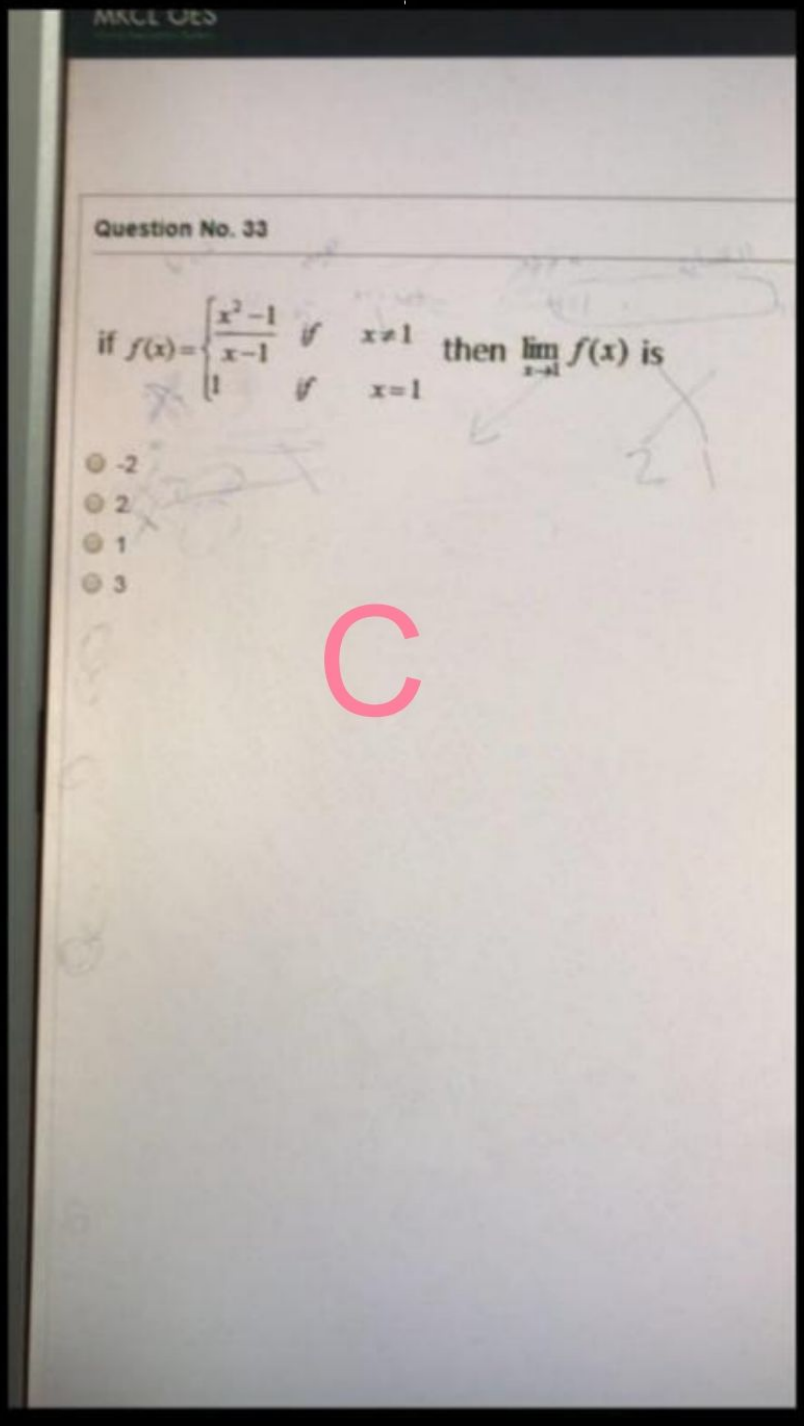
Let U={1,2,3,4,5,6,7}, A={1,3,5,7}, and B={3,4,6}. Find A∪ B′

- {2,4,3}
- {1,2,3,5,7}
- {4, 6}
- {1,2,3,4}

B

Save & Next حفظ و التالي

HP Compaq LE2002x

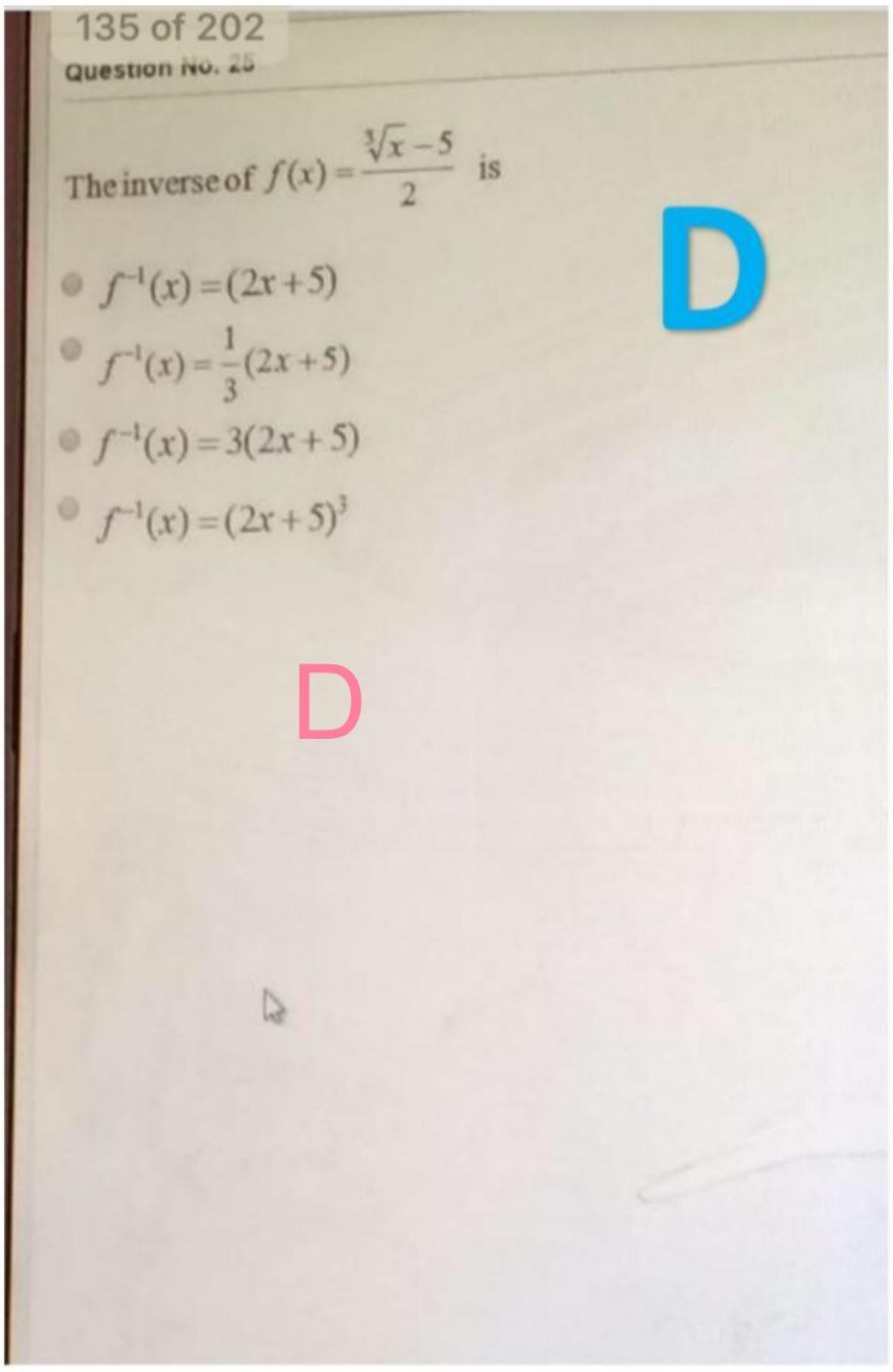


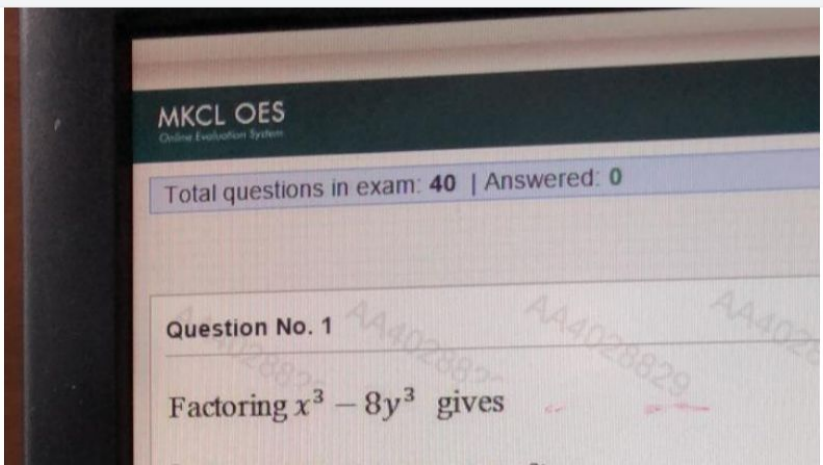
Question No. 33

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

- -2
- 2
- 1
- 3

C


135 of 202
Question No. 25
The inverse of $f(x)=\frac{\sqrt[3]{x}-5}{2}$ is
$f^{-1}(x)=(2x+5)$
$f^{-1}(x)=\frac{1}{3}(2x+5)$
$f^{-1}(x)=3(2x+5)$
$f^{-1}(x)=(2x+5)^3$
D
D


MKCL OES
Online Evaluation System
Total questions in exam: 40 | Answered: 0
Question No. 1
Factoring x^3-8y^3 gives

Question No. 33

The function $f(x)=\begin{cases} kx-k & \text{if } x\geq 3 \\ 4 & \text{if } x<3 \end{cases}$ is continuous if

- $k=2$
- $k=3$
- $k=\frac{4}{3}$
- $k=1$

A

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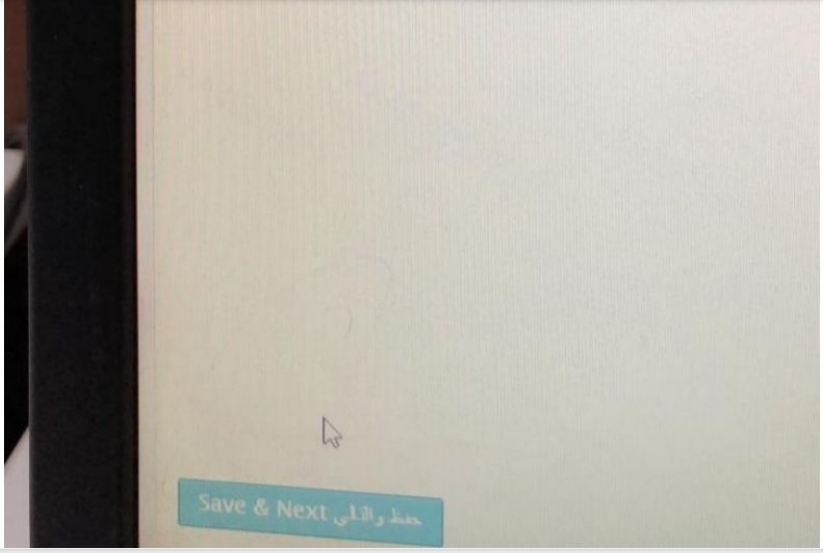
Total questions in exam: **40** | Answered: **0**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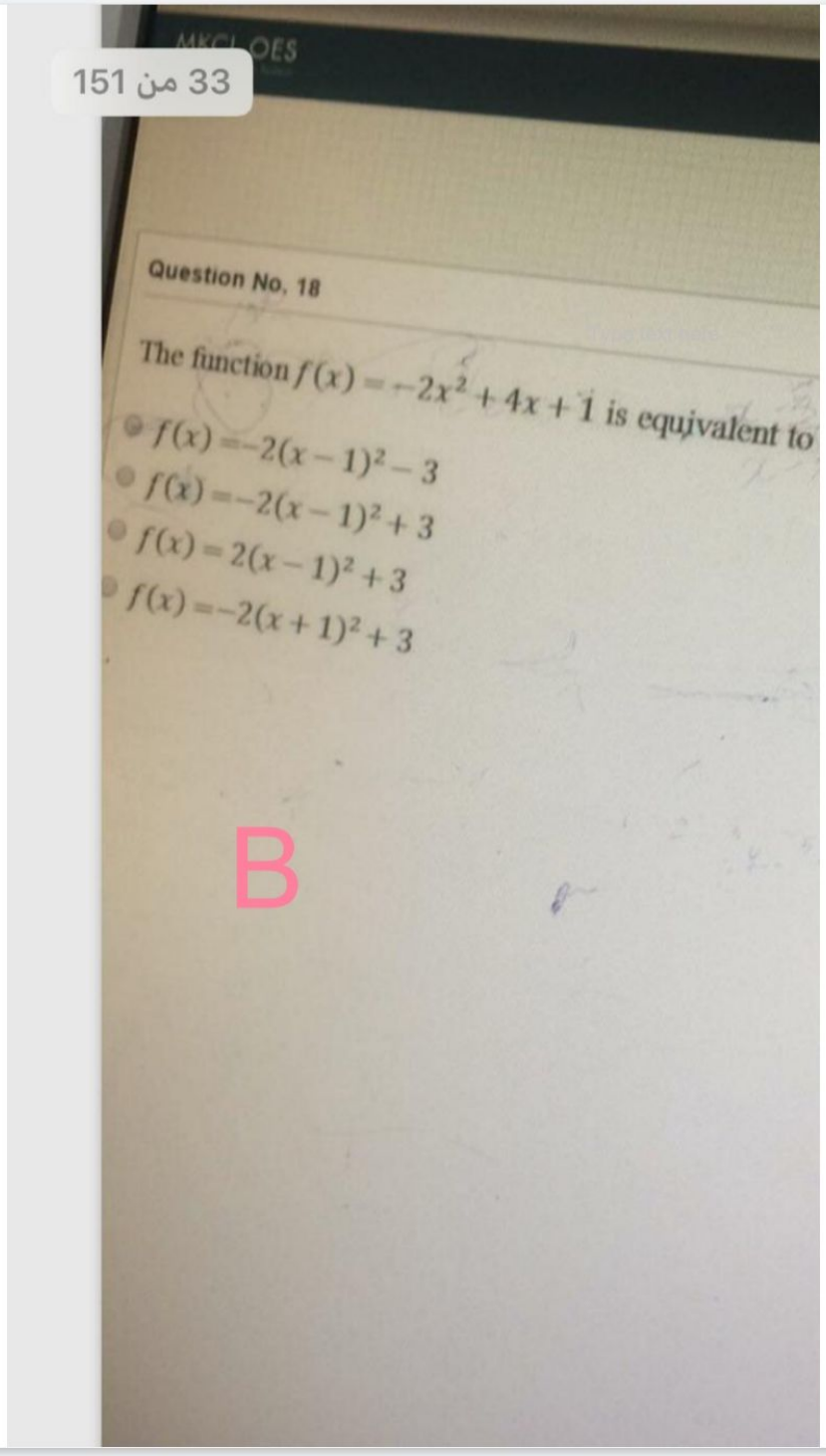
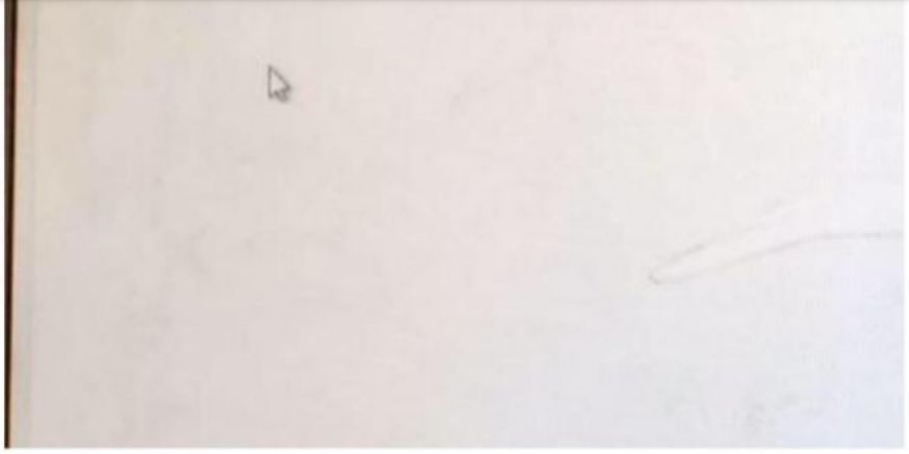
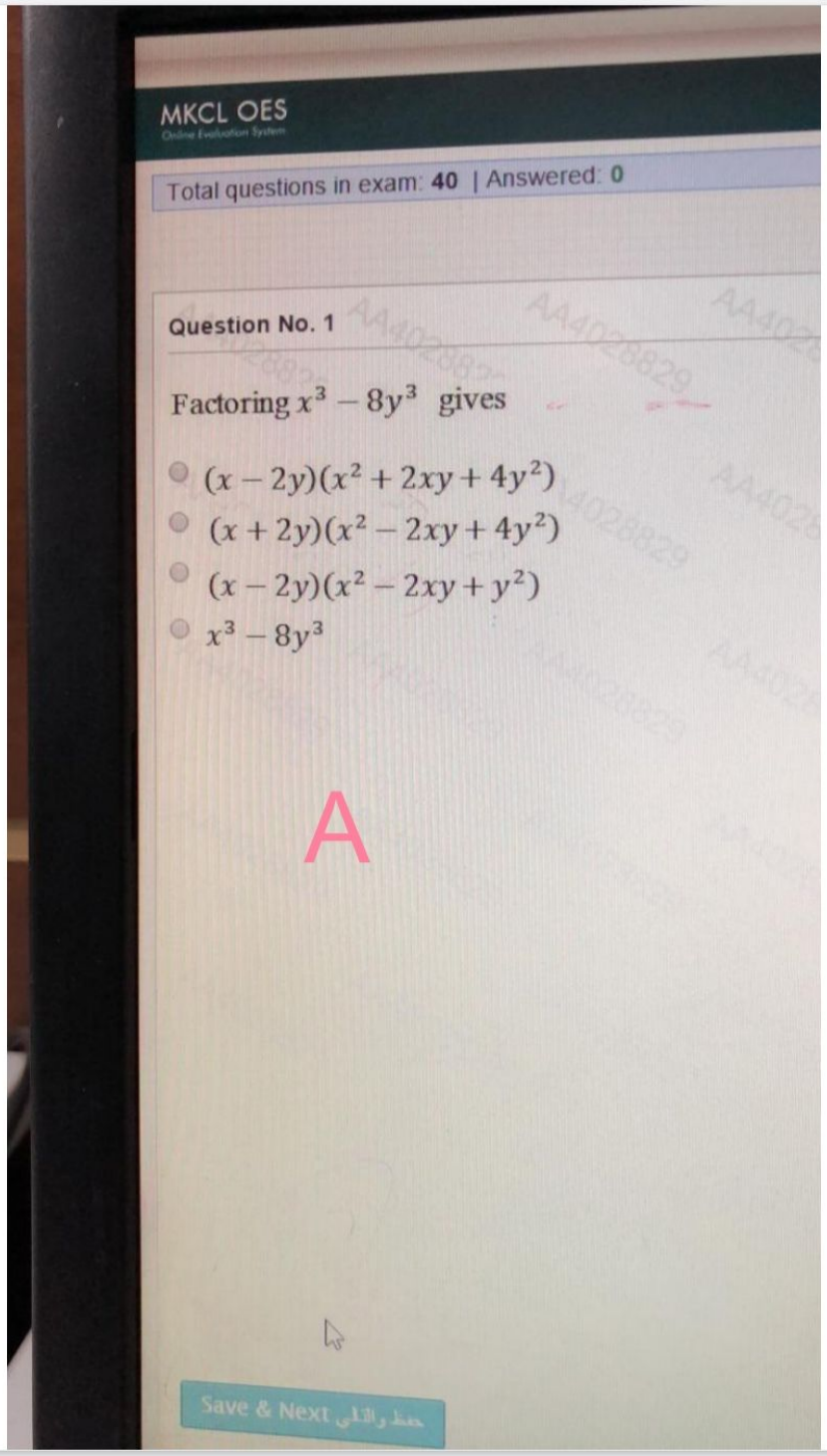
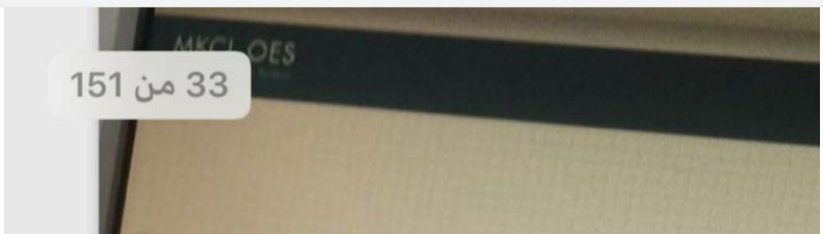
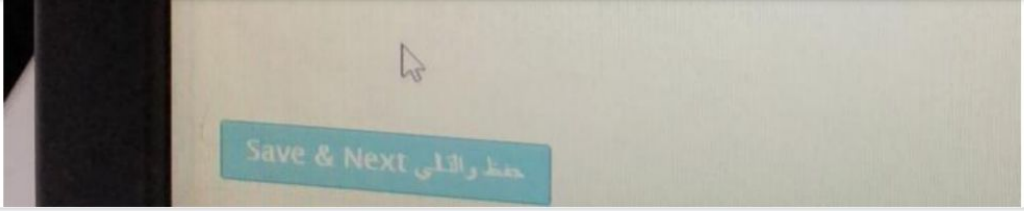

33 من 151
MKCL OES
Question No. 18
The function $f(x) = -2x^2 + 4x + 1$ is equivalent to
$f(x) = -2(x-1)^2 - 3$
$f(x) = -2(x-1)^2 + 3$
$f(x) = 2(x-1)^2 + 3$
$f(x) = -2(x+1)^2 + 3$
B




MKCL OES
Online Evaluation System
Total questions in exam: 40 | Answered: 0
Question No. 1
Factoring $x^3 - 8y^3$ gives
$(x-2y)(x^2+2xy+4y^2)$
$(x+2y)(x^2-2xy+4y^2)$
$(x-2y)(x^2-2xy+y^2)$
x^3-8y^3
A
Save & Next


MKCL OES
33 من 151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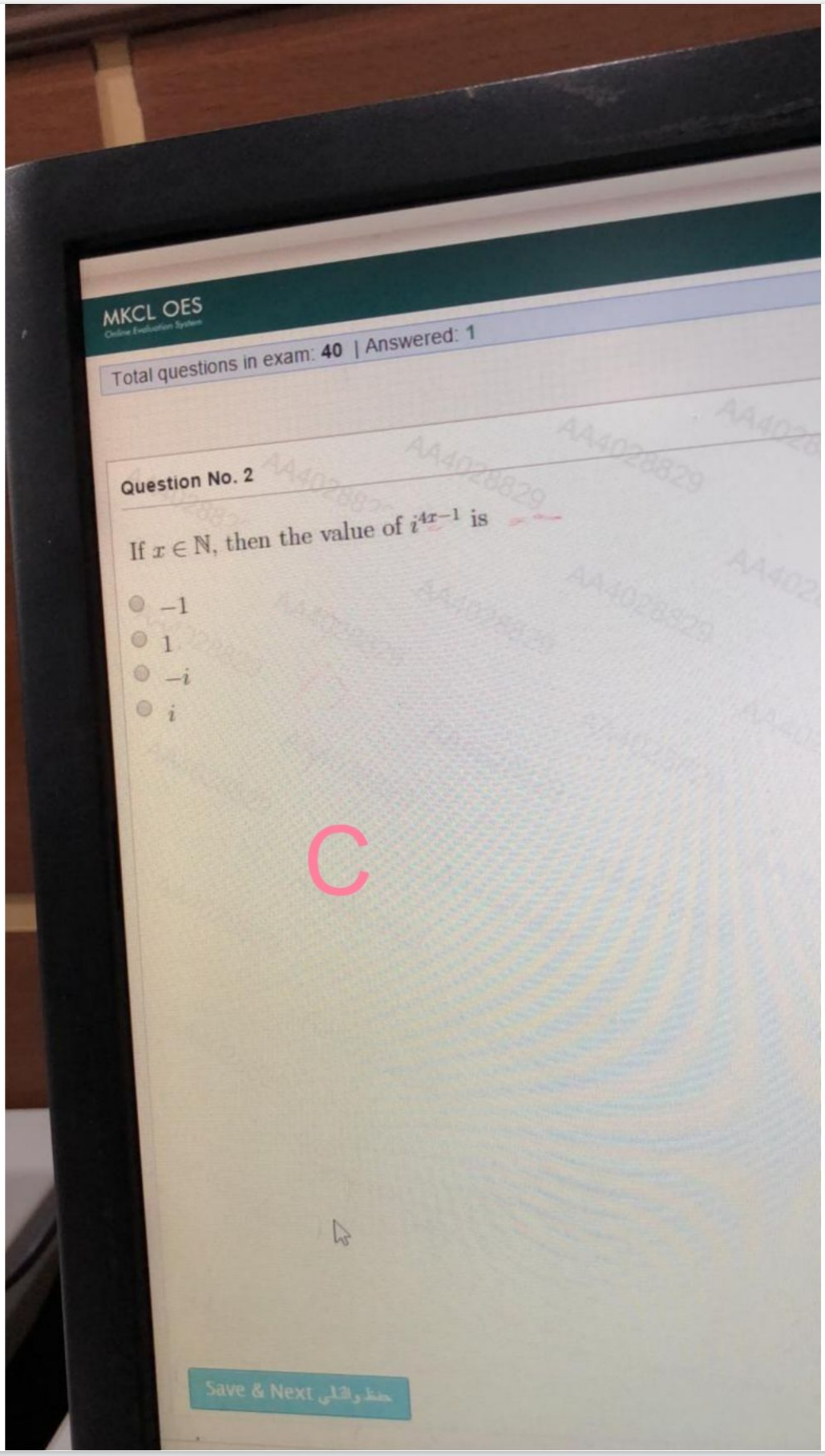
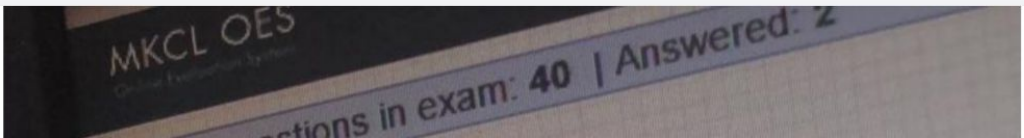

MKCL OES
Total questions in exam: 40 | Answered: 1
Question No. 2
If $x \in \mathbb{N}$, then the value of i^{4x-1} is
-1
1
$-i$
i
C
Save & Next


MKCL OES
stions in exam: 40 | Answered: 2

MKCL OES

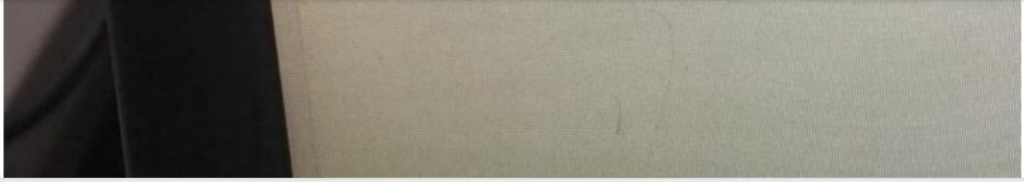
Total questions in exam: 40 | Answered: 2

Question No. 3

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

- -1
- 0
- $-\infty$
- 1

C



MKCL OES

Online Evaluation System

Total questions in exam: **40** | Answered: **5**

Question No. 6

Evaluate $\lim_{x \to \infty} \left(x^3 + x - 3\right) =$

- 0
- 3
- -3
- ∞

D