Total questions in exam: 40 | Answered: 2

Question No. 3

A⁻

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

ve & Next

0:20

MKCL OES

Math_FT_Sem1_2

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

Question No. 7

If $f(x)$ is a polynomial such that the remainder of the division $f(x) \div (x+4)$ equals 10 then

- $f(-4) = 10$
- $f(4) = 10$
- $f(10) = 4$
- $f(10) = -4$

A

Save & Next

OES

al questions in exam: 40 | Answered: 11

Question No. 35

Let $a > 0$ and $f(x) = (a^2 - 9)x^2 + x - a$. Give the value of a such that $f($

- a = 3
- a = - 3
- a = 2
- a = 1

A

MKCL OES

Total questions in exam: **40** | Answered: **36**

Question No. 16

Which of the following is not a function?

- $y^2 = x$
- $y = x + 4$
- $y = 4x - 6$
- $3y = 5x$

A

MKCL OES

Math_FT_S

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

Question No. 4

Let $U = \{0,1,2,3,4,5,6,7,9\}$, and $A = \{1,3,5,7\}$ the complement of A is

- $\{1,3,5,7\}$
- $\{1,2,3,4,5,6,7\}$
- $\emptyset$
- $\{0,2,4,6,9\}$

D

MKCL OES

Online Evaluation System

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

Question No. 2

The range of the function $f(x) = 1 + 2^{5x}$ is

- $(1, \infty)$
- $(0, \infty)$
- $(-\infty, \infty)$
- $(2, \infty)$

A

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

Question No. 3

Find the axis of symmetry of $y = 2(x-5)^2 + 3$

- $y = 3$
- $y = -3$
- $x = 5$
- $x = 3$

C

Save & Next

Question No. 23

If $f(x) = -\sqrt{2}$ then $f(x)$ is

- not defined
- decreasing
- increasing
- constant

D

ve & Next

MKCL OES

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Online Evaluation System

Total questions in exam: **40** | Answered: **3**

Question No. 24

Write the expression in lowest term $\frac{a-b}{a^2-b^2}$,where a $\neq$ b

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

C

MKCL OES

Total questions in exam: **40** | Answered: **8**

Question No. 33

The equation $x = 2 - \log_3 y$ is equivalent to the equation

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

C

MKCL OES

Math_FT_Sem1_2019

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

A⁻ A A⁺

Question No. 2

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

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

B

Save & Next

MKCL OES

Online Evaluation System

Total questions in exam: **40** | Answered: **18**

Question No. 27

Solve the inequality $\dfrac{x^2 + 10x + 25}{x + 1} \geq 0$

- $(-1, +\infty)$
- $\{-5\} \cup (-1, +\infty)$
- $[-5, +\infty)$
- $(-5, -1)$

B

MKCL OES

Total questions in exam: 40 | Answered: 0

Question No. 21

Solve: $ax^2 + bx + c = 0$

- $S = \left\{ \dfrac{-b-\sqrt{b^2+4ac}}{2a}, \dfrac{-b+\sqrt{b^2+4ac}}{2a} \right\}$
- $S = \left\{ \dfrac{-b-\sqrt{b^2-4ac}}{2a}, \dfrac{-b+\sqrt{b^2-4ac}}{2a} \right\}$
- $S = \left\{ \dfrac{-b-\sqrt{b^2-4ac}}{a}, \dfrac{-b+\sqrt{b^2-4ac}}{a} \right\}$
- $S = \left\{ \dfrac{b-\sqrt{b^2-4ac}}{2a}, \dfrac{b+\sqrt{b^2-4ac}}{2a} \right\}$

b

Save & Next

Total questions in exam: 40 | Answered: 0

Question No. 1

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

- 5
- 2
- 3
- 52

B

Save & Next

MKCL OES

Total questions in exam: **40** | Answered: **23**

Question No. 27

The equation $x = 2^y + 1$ is equivalent to the equation

- $x = \log_2(y+1)$
- $y = \log_2(x-1)$
- $x = \log_2(y-1)$
- $y = \log_2(x+1)$

B

MKCL OES

Math_FT_Sem1_2019

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

Question No. 32

The domain of the function $f(x) = 3 - 2\log_{\frac{1}{2}}(x-5)$ is

- $(5, \infty)$
- $(0, \infty)$
- $(-\infty, \infty)$
- $(-\infty, 5)$

A

Save & Next

MKCL OES

Math_FT_Sem1

Total questions in exam 40 | Answered: 30

Question No. 33

Let $a \in \mathbb{R}$. The solution set of the equation $\dfrac{1}{2^{a-x}} = 32$ is

- {a + 5}
- {1}
- {a − 5}
- {0}

A

Save & Next

Question No. 17

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

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

Save & Next

MKCL OES

Total questions in exam: **40** | Answered: **27**

Question No. 24

Factoring $x^3 + y^3$ gives

- $(x-y)(x^2+xy+y^2)$
- $x^3 - y^3$
- $(x-y)(x^2-2xy+y^2)$
- $(x+y)(x^2-xy+y^2)$

D

Save & Next

Question No. 19

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

- 2
- 0
- -2
- Does not exist

D

MKCL OES

Total questions in exam: **40** | Answered: **3**

Question No. 25

Which of these quadratic functions has the narrowest graph?

- $y = -4x^2$
- $y = \frac{1}{7}x^2$
- $y = \frac{1}{3}x^2$
- $y = -3x^2$

A

Save & Next

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MKCL OES

Total questions in exam: **40** | Answered: **27**

Question No. 33

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

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

B

MKCL OES

Online Evaluation System

Total questions in exam: **40** | Answered: **3**

Question No. 23

Simplify the expression. $\sqrt{-16}$

- 4
- is not a real number
- -4
- -8

B

Question No. 9

If $a < b < c$, solve the inequality $\frac{(x-a)(x-b)}{(x-c)} \leq 0$, for x.

- $(-\infty, a]$
- $[a, b] \cup (c, \infty)$
- $[a, \infty)$
- $(-\infty, a] \cup [b, c)$

Save & Next

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Question No. 1

If $f(x) = \sqrt{x+2}$ and $g(x) = 3x - 5$. The domain of $(f \circ g)(x)$ is

- $(-2, \infty)$
- $[-2, \infty)$
- $[1, \infty)$
- $(1, \infty)$

Question No. 18

Which of the following inequalities is false?

- $\frac{1}{1+x^2} > 1.$
- $x \leq x.$
- $\frac{1}{1+x^2} \leq 1.$
- $x^2 \leq x^2 + 1.$

A

MKCL OES

Math_FT_Sem

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

Question No. 4

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

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

b

MKCL OES

Math_FT_Sem1_2019

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

Question No. 10

A⁻ A

Let $b \in \mathbb{R}\setminus\{\frac{1}{4}\}$. Give the value of b such that the line $y = (4b-5)x + 2$ is perpendicular to the line $bx - y = 3$.

- b = 2
- b = 3
- b = 1
- b = -3

C

Save & Next

MKCL OES

Math_FT_Sem1_2019

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

Question No. 36

Let a be an integer. Give all values of a such that the function F is a one-to-one function.

$$F = \{(7,-1),(5,1-a),(0,5),(-2,a),(1,3)\}$$

- $a \in \mathbb{R} \setminus \{-1,5,3,2\}$
- $a \in \{1,5,-2\}$
- $a \in \mathbb{R} \setminus \{5,3,2\}$
- $a \in \mathbb{R} \setminus \{-1,5,3,2,-4,-2\}$

D

MKCL OES

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

Question No. 6

If $\theta = 180^{\circ}$ then θ is called

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

D

MKCL OES

Total questions in exam: 40 | Answered: 38

Question No. 25

The equation $y = 2 \log_4 x$ is equivalent to the equation

- $y = x^4$
- $x = y^4$
- $y = 2^x$
- $x = 2^y$

d

MKCL OES

Math_FT_Sem

Total questions in exam: **40** | Answered: **26**

Question No. 20

If $f(x)$ is a polynomial such that $f(1) = 6$ then the remainder of the division $f(x) \div (x-1)$ equals:

- 1
- -6
- 6
- -1

C

Save & Next

MKCL OES

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

Question No. 7

The solution of the equation $3^x = 5$ is

- $\frac{\ln 3}{\ln 5}$
- $\frac{\ln 5}{\ln 3}$
- $\ln(\frac{3}{5})$
- $\ln(\frac{5}{3})$

B

MKCL OES

Online Evaluation System

Total questions in exam: **40** | Answered: **3**

Question No. 25

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

A

Question No. 39

Let $a \in \mathbb{R}$. Find the equation of the line passes through the points $(2, 2a)$ and $(1, a)$.

- $x - ay = 1$
- $ax + y = 0$
- $ax - y = 1$
- $ax - y = 0$

D

Save & Next

Question No. 9

If $a < b < c$, solve the inequality $\frac{(x-a)(x-b)}{(x-c)} \leq 0$, for x.

- $(-\infty, a]$
- $[a, b] \cup (c, \infty)$
- $[a, \infty)$
- $(-\infty, a] \cup [b, c)$

D

Save & Next

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Question No. 33

If $\csc\theta = 5$ then $\sin\theta =$

- $\frac{1}{5}$
- $\frac{\sqrt{26}}{26}$
- 5
- $\frac{5\sqrt{26}}{26}$

A

Save & Next

MKCL OES

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

Question No. 1

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

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

B

Save & Next

Total questions in exam: 40 | Answered: 0

Question No. 1

Find $(f \circ g)(x)$, where $f(x)=x^2-1$, $g(x)=x^2+3$

- x^4+6x^2+8
- x^4+4
- x^4+2x^2+4
- x^4+8

$f(x) = x^2 - 1$, $g(x) = x^2 + 3$

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

$= (x+3)^2 - 1$

$\boxed{= x^4 + 6x^2 + 8}$

Save & Next حفظ و التالي

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

Question No. 2

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

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

D

احل

Save & Next حفظ والتالي

الطريقة الاولى :

① $\ln 2^{x} = \ln 3^{2x-1}$

② $x\ln 2 = 2x(\ln 3) - \ln 3$

③ $x\ln 2 - 2x(\ln 3) = -\ln 3$

④ $x(\ln 2 - 2\ln 3) = -\ln 3$

⑤ $$x = \frac{-\ln 3}{\ln 2 - 2\ln 3}$$

⑥ ~~x~~ السالب عامل مشترك

$$\frac{-(\ln 3)}{-(2\ln 3 - \ln 2)} = \boxed{\frac{\ln 3}{2\ln 3 - \ln 2}}$$

الطريقة الثانية : بالتجريب

نعوض عن x بأحد الخيارات

Question No. 3

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

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

$$-2 \le 3 - 5x \le 18$$

$$-3 \quad -3 \quad -3$$

$$\frac{-5}{-5} \le \frac{-5x}{-5} \le \frac{15}{-5}$$

$$1 \ge x \ge -3$$

$\boxed{[-3, 1]} \rightarrow D$

Question No. 4

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

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

$\boxed{\text{D}}$

الحل

الطريقة الجبرية:

$$-1 + \log_8 (3x + 2 = -\frac{1}{3}$$

$$\log_8 (3x+2) = -\frac{1}{3} + 1$$

$$\log_8 (3x + 2 = \frac{2}{3}$$

$$3x+2 = 8^{\frac{2}{3}}$$

$$3x = 4 - 2$$

$$3x = 2$$

$$\boxed{x = \frac{2}{3}}$$

الطريقة الثانية:

باسهة: بالتجريب

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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

$\boxed{y = 2}$

A

Question No. 6

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

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

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

$$\boxed{x-9}$$

A

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

Question No. 7

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

- 5
- 3
- 2
- 52

اعلى درجة

C

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

بالتعويض

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

$\boxed{D}$

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

Question No. 10

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

- 0
- 3
- -3
- ∞

* نشوف اعلا درجة = x^3

* اعوض كل x بـ (∞) = $(\infty)^3$

يكون = $\boxed{\infty} \longrightarrow$ D

Question No. 11

Factor : $5x^2 - tx^2 - 5z + tz$

- $(x^2 - z)(5 - t)$
- $(x^2 - z)(5 + t)$
- $(x^2 + z)(5 + t)$
- $(x^2 + z)(5 - t)$

$x^2(5-t) - z(5-t$

$(x^2 - z)(5-t)$

A

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.

$$F = \{(7,-1),(5,1-a),(0,5),(-2,a),(1,3)\}$$

- $a \in \mathbb{R} \setminus \{-1,5,3,2\}$
- $a \in \mathbb{R} \setminus \{-1,5,3,2,-4,-2\}$
- $a \in \mathbb{R} \setminus \{5,3,2\}$
- $a \in \{1,5,-2\}$

B

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Question No. 13

Use the square root property to solve this quadratic equation

$$x^2 + 20 = 4$$

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

$x^2 = 4 - 20$

$x^2 = -16$

$\boxed{x = \pm 4i}$

A

Save & Next حفظ والتالي

Question No. 14

Evaluate $\lim\limits_{x \to -\infty} \dfrac{x^4+2x^2-1}{x^3-2x-2} =$

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

* درجة البسط اعلى من المقام ؟ = $\boxed{-\infty}$

C

Save & Next حفظ والتالي

Question No. 15

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

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

* بما انه ال(a) سالب

فيكون الجواب

c

Save & Next حفظ والتالي

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

* التعويض ما ينفع .. فلازم نبسط

$$\frac{\cancel{(x+3)}(x+4)}{\cancel{(x+3)}} = (x+4)$$

$$= (-3+4) = 1$$

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

Question No. 17

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

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

* دائماً مجال الدالة الأسية

$(-\infty, +\infty)$

A

Question No. 18

The function has an inverse if

- None of these answers
- doesn't satisfy the horizontal line test
- it is one-to-one
- it is quadratic

C

Question No. 19

Evaluate $\lim_{x \to -\infty} \frac{x+5}{2x+3} =$

- $\frac{5}{3}$
- 0
- $\frac{1}{2}$
- ∞

* درجة البسط تساوي درجة المقام

نقسم المعاملات = $\boxed{\frac{1}{2}} \rightarrow$ C

Question No. 20

The solution set of the equation $3(x+3) = 3x - 9$ is

- the set of real numbers
- $\{2,3\}$
- 1
- $\emptyset$

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

$$3x - 3x = -9 - 9$$

$$0 = -18$$

$$\boxed{\emptyset} \longrightarrow \boxed{D}$$

MKCL OES

Math_FT_

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

- $\{1,3,5,7\}$
- $\{0,2,4,6,9\}$
- $\emptyset$
- $\{1,2,3,4,5,6,7\}$

$A' = \{0, 2, 4, 6, 9\}$

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

الحل

let x be $= 1$

1 $\lim_{x \to 1} f(x) = f(1)$

$\lim_{x \to} f(x) = 1$

2 نشوف النهاية من اليسار = النهاية من اليمين

$\lim_{x \to 1^-} f(x) = 1$, $\lim_{x \to 1^+} f(x) = k - 1$

3 نساويهم ببعض عشان نطلع قيمة k

$$k - 1 = 1$$

$$k = 1 + 1$$

$$\boxed{k = 2}$$

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

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

Total questions in exam: 40 | Answered: 0

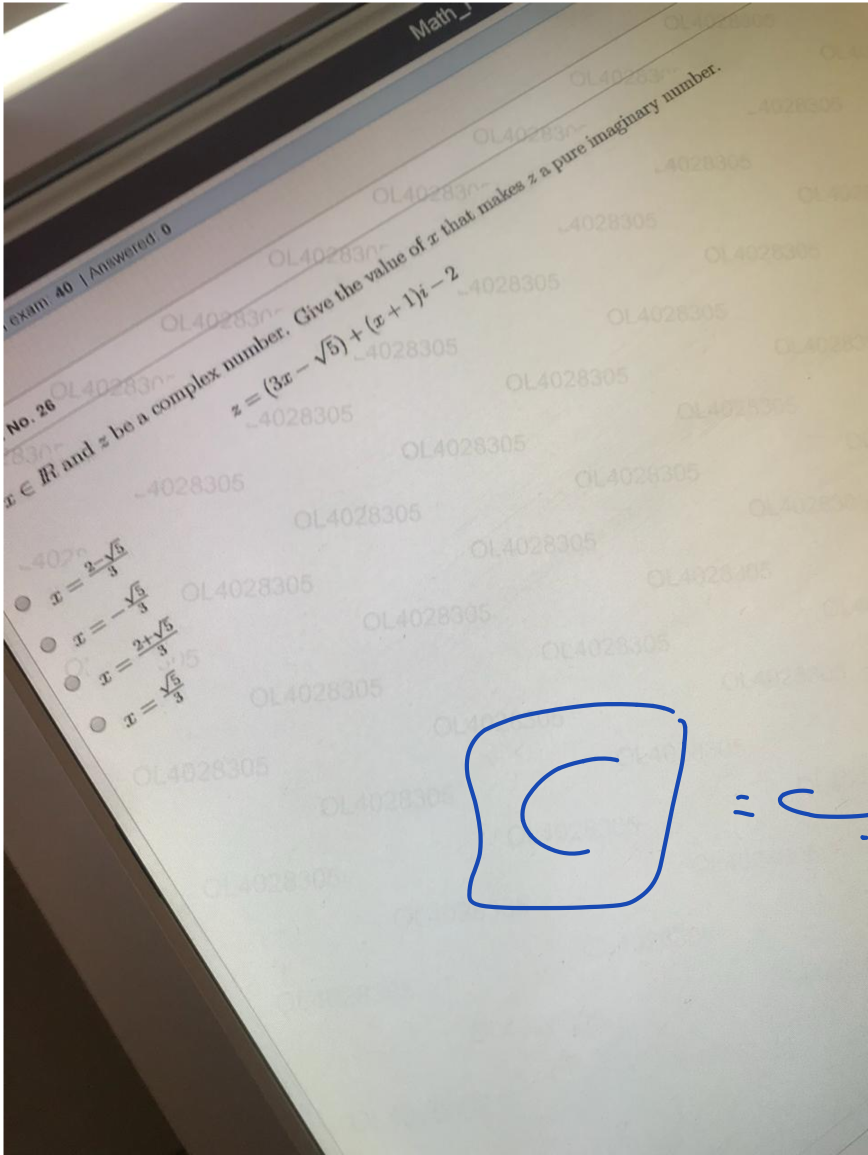
Question No. 25

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

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

بالتعويض عن x ب 2

$$\log_{\frac{1}{2}}(4) = \boxed{-2}$$



Math_

exam: 40 | Answered: 0

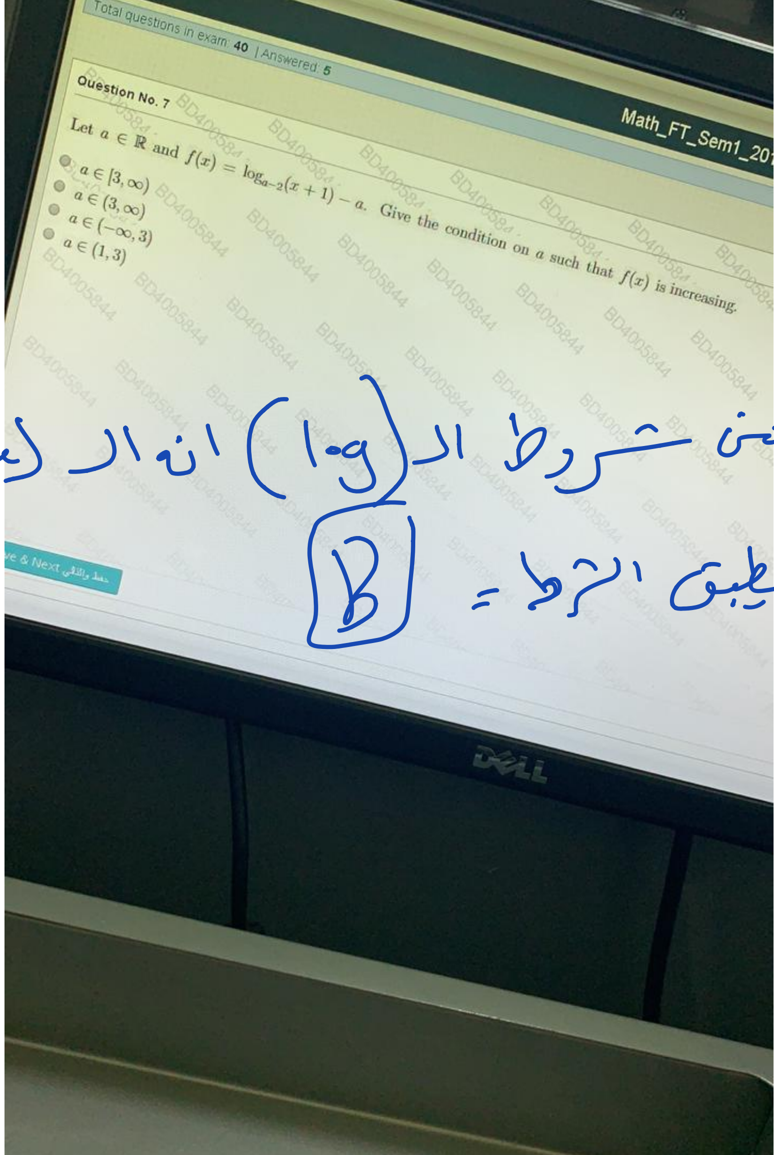
No. 26

$x \in \mathbb{R}$ and z be a complex number. Give the value of x that makes z a pure imaginary number.

$$z = (3x - \sqrt{5}) + (x+1)i - 2$$

- $x = \frac{2-\sqrt{5}}{3}$
- $x = -\frac{\sqrt{5}}{3}$
- $x = \frac{2+\sqrt{5}}{3}$
- $x = \frac{\sqrt{5}}{3}$

بالتجريب : $\boxed{c}$



* من شروط الـ (log) انه الـ (a) :

① $a > 0$

② $a \neq 1$

اللي يطبق الشرط = $\boxed{B}$

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

Question No. 7

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

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

A

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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

$$i^{4(1)-1} = i^{3} = -i$$

$$i^{4(2)-1} = i^{7} = -i$$

$$i^{4(3)-1} = i^{11} = -i$$

C

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
- $a - b$

$$ab\left(\frac{1}{a} - \frac{1}{b}\right)$$

$$\frac{ab}{a} - \frac{ab}{b} = \boxed{b - a}$$

A

Save & Next حفظ والتالي

Question No. 5

If $f(x) = 1 - \sqrt{x+2}$, then the domain of $f^{-1}(x)$ is

- $[1, \infty)$
- $[-2, \infty)$
- $(-\infty, \infty)$
- $(-\infty, 1]$

D

Question No. 18

Which of the following is a pair of inverse functions?

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

$\boxed{B}$

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MKCL OES

Online Evaluation System

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

Math_

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.
- $z = i$.

$z = (1-i)$

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

B

8:53 4G

Question No. 15

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

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

Domain $p(x) = [-3, \infty)$

Domain $q(x) = [4, \infty)$

Domain $(p \cdot q)(x) = [4, \infty)$

C

Save & Next

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

اكتبوا اس i بالحسابه لحاله وافرضوا قيمه لـ X خلوها
3 راح يطلع لكم الناتج 1197 اقسموه على 4
بيطلع العدد كذا 299.25 معناتها i اضربها ب
3 بيطلع الناتج A

$0.25 \to i \quad 0 \to 1$

$0.75 \to -i \quad 0.5 \to -1$

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MKCL OES

Online Evaluation System

Total questions in exam: **40** | Answered: **3**

Question No. 4

The supplement of the angle 45° is:

- 45°
- 60°
- 80°
- 135°

$45 + x = 180$

$x = 180 - 45$

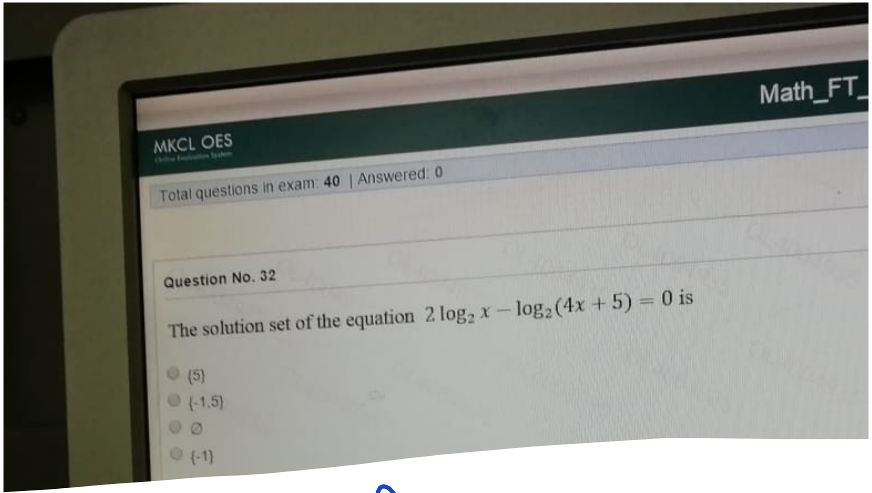
$\boxed{x = 135^\circ} \rightarrow D$

Question No. 8

The expression xyz can be classified as a

- monomial
- binomial
- none of these
- trinomial

A



$$2\log_2 x - \log_2 (4x+5) = 0 \qquad x^2 = 4x+5$$

$$x^2 - 4x - 5 = 0$$

$$\log_2 \frac{x^2}{4x+5} = 0$$

$$\frac{x^2}{4x+5} = 2^0$$

$$\boxed{x = 5}, \; x = -1$$

لان لوغاريتم ما بيجي منه عدد سالب

($\boxed{A}$)

MKCL OES
Online Evaluation System

Math_FT_S

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

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

$$= (1+1)$$

$$\boxed{= 2}$$

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Math_FT_

MKCL OES

Online Evaluation System

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

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Math_FT_

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

Question No. 36

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

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

$\boxed{C}$

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$$\left(\sqrt{2}\right)^{3-5x} = \left[\left(\sqrt{2}\right)^{4}\right]^{a+x}$$

$$\left(\sqrt{2}\right)^{3-5x} = \left(\sqrt{2}\right)^{4a+4x}$$

$$3-5x = 4a+4x$$

$$-5x-4x = 4a-3$$

$$-9x = 4a-3$$

$$x = \frac{4a-3}{-9}$$

$$x = \frac{-3}{-9} + \frac{4a}{-9}$$

$$x = \frac{1}{3} - \frac{4a}{9}$$

Question No. 38

Evaluate $\lim_{x \to -\infty} \left(2x^4 + x - 1\right) =$

- 1
- 2
- 0
- ∞

$\boxed{D}$

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ons 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

Question No. 27

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

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

C

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

Question No. 39

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

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

$\log_a x = y$

$\boxed{a^y = x} \longrightarrow \boxed{B}$

MKCL OES

Math_FT

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

Question No. 27

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

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

نجيب مجال معكوس
الداله

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

$$-x+1=0$$
$$-x=-1$$
$$x=1$$

الجواب هو C جميع الاعداد
الحقيقه ما عدى 1

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Math_FT_Sem1_2018

Total questions in exam: 40 | Answered: 1

Question No. 2

Suppose $a \in \mathbb{R}$. Give the value of a such that the equation $|2x+3| = |x+a|$ has one solution.

- $a = -\frac{2}{3}$
- $a = -\frac{3}{2}$
- $a = \frac{2}{3}$
- $a = \frac{3}{2}$

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التالي

D

$$2x + 3 = x + a$$

$$2x - x = a - 3$$

$$\boxed{x = a - 3}$$

$$2x + 3 = -x - a$$

$$2x + x = -a - 3$$

$$3x = -a - 3$$

$$\boxed{x = \frac{-a - 3}{3}}$$

$$a - 3 = \frac{-a - 3}{3}$$

$$3a - 9 = -a - 3$$

$$3a + a = -3 + 9$$

$$4a = 6$$

$$a = \frac{6}{4}$$

$$\boxed{a = \frac{3}{2}}$$

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

Question No. 6

Use the quadratic formula to solve this equation:

$$8x^2 = 6x - 1$$

- $x = \{4, \frac{1}{2}\}$
- $x = \{-\frac{1}{2}, \frac{1}{4}\}$
- $x = \{\frac{1}{2}, \frac{1}{4}\}$
- $x = \{2, \frac{1}{4}\}$

$-8x^2\ 6x\ -1$

بالسبة

C

Save & Next

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

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

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

$$\boxed{= a^{12} + 2a^8 - 1}$$

$$\boxed{C}$$

Save & Next حفظ والتالي

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

inverse of F : (y,x)

Save & Next حفظ والتالي

Question No. 1

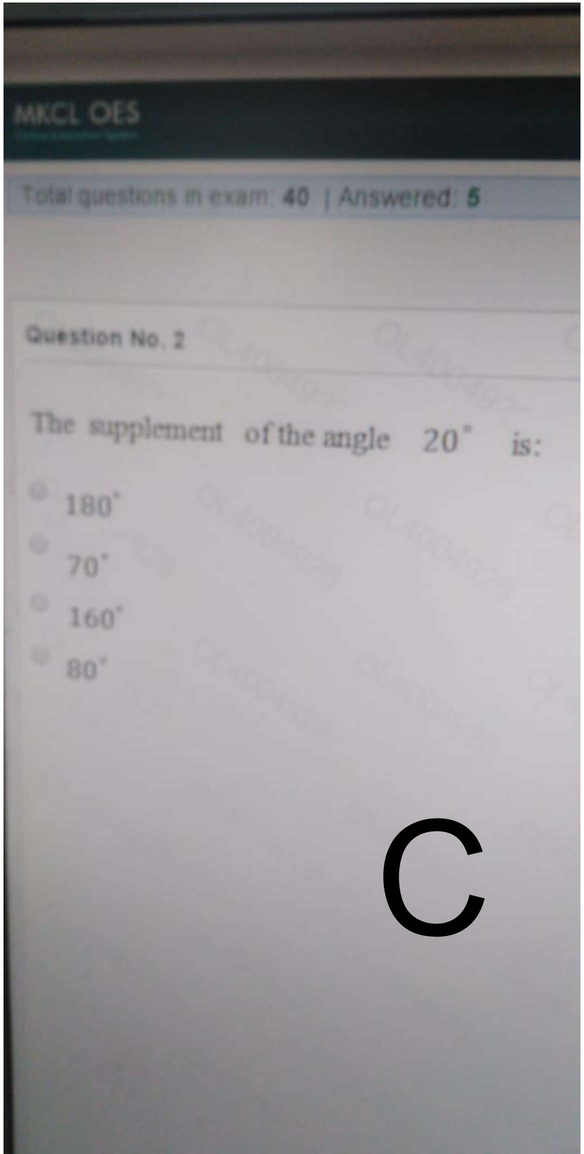
Evaluate $\lim_{x \to 2} \frac{x^3 - 1}{x - 1} =$

- 1
- 7
- 2
- 4

ملاحظه جدا مهمه في مثل هذي
المعادلات عوض في البدايه اذا عطاك
ناتج 0 وقتها عوض محل الاكس ب
2.000000001

B

(2)^3 -1/(2-1)
8 - 1 / 1
7/1 = 7



supplement=180
180 = 20 + x
180 - 20 = x
160 = x

MKCL OES

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

Question No. 3

The complement of the angle 60° is:

- 140°
- 120°
- 70°
- 30°

D

Complement = 90

90 = 60 + x

90 - 60 = x

x = 30

MKCL OES

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

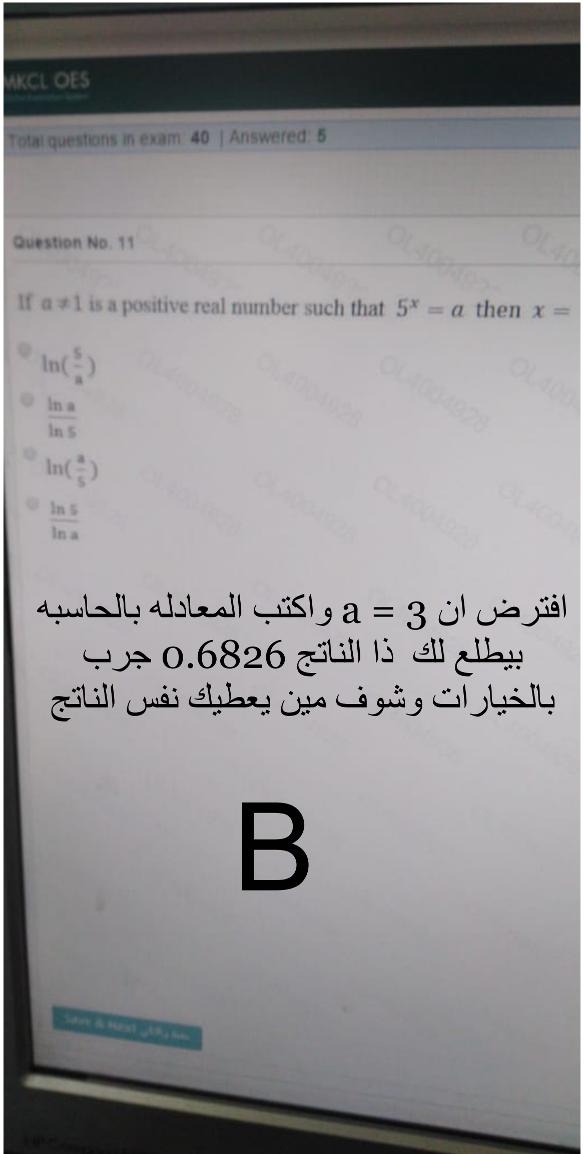
Question No. 14

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

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

C

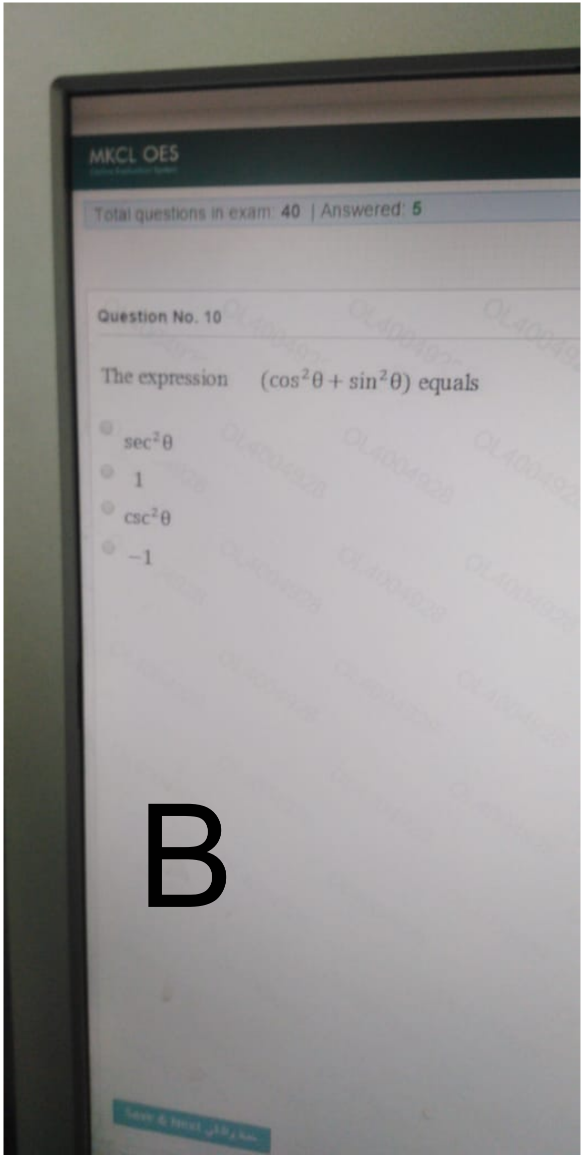
logx y = z -> x^z = y
 y = 3^(x-1) -> log3 y = x-1
1 + log3 y = x



افترض ان a = 3 واكتب المعادله بالحاسبه
بيطلع لك ذا الناتج 0.6826 جرب
بالخيارات وشوف مين يعطيك نفس الناتج

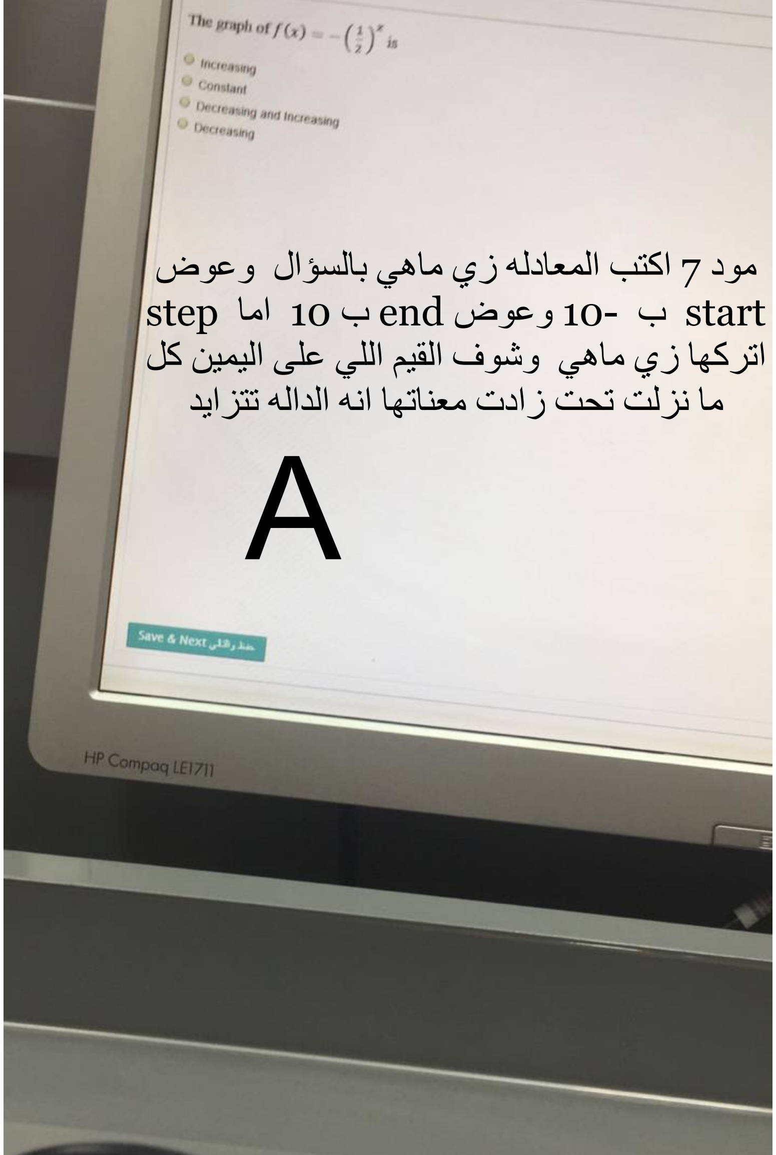
B

5^x = a
in 5^x = in a
x in 5 = in a
x = in a / in 5


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

sin^2 + cos^2 = 1



f(x) = -a^x
if 0 < a < 1
then it's increasing

f(x) = -a^x
if a > 1
then it's decreasing

Type text he

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

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

B

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Online Evaluation System

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

Any function with ^2 is not one to one

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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

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 $(-\infty, 2) \cup (2, +\infty)$ then

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

B

We know that 2 is not in soultion set
to find a we should replace x by 2
4*2 - 8 = 0 , then a>0 , 0 is a number which doesn't
satisfy the equation.

Total questions in exam: 40 | Answered: 32

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 $b = 1$.

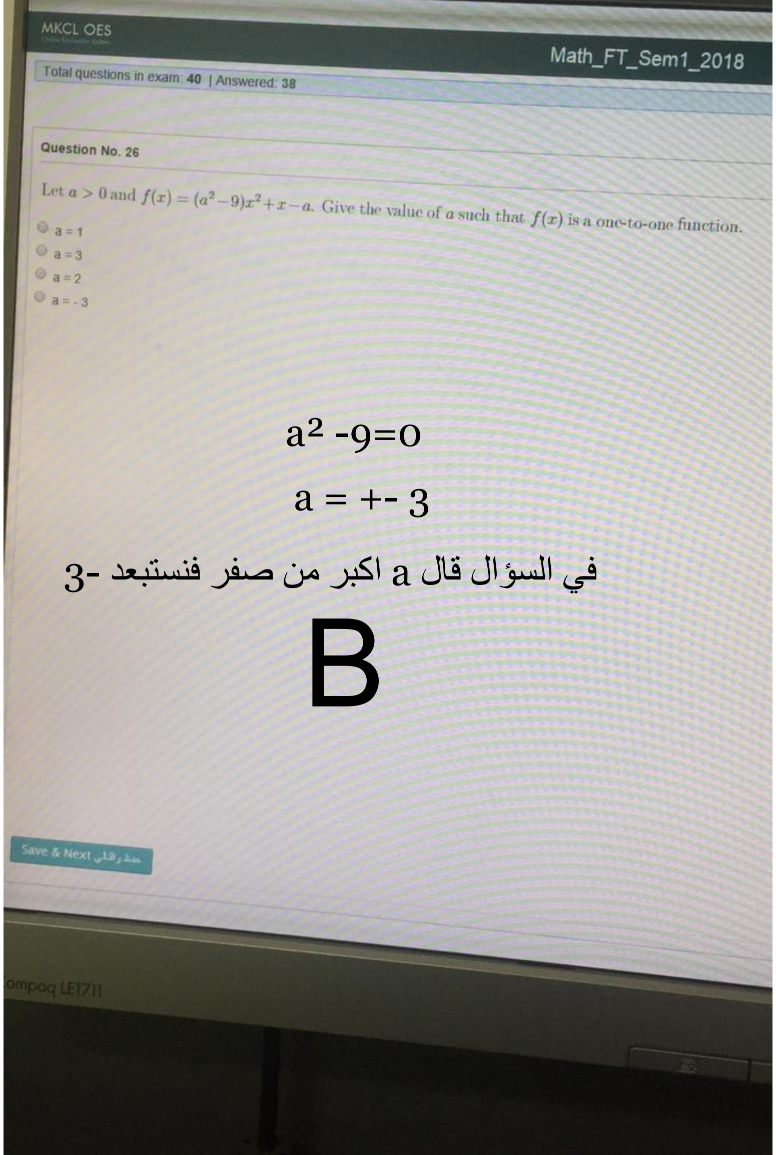
C

$$ax^2+bx+1 = ax^2-bx+1$$

$$bx=-bx$$

$$2b=0$$

$$b=0$$



$a^2 - 9 = 0$

$a = +- 3$

في السؤال قال a اكبر من صفر فنستبعد 3-

B

if there's x^2 then
this is not one to one.

we use the number that
gives x^2=0

remeber a shoul be POSITIVE
a > 0

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

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

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C

(a^4)^3 + 2(a^4)^2 - 1

a^(4*3) + 2(a)^(4*2) - 1

a^12 + 2a^8 - 1

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

Lim+ = lim-

D

lim x-> -3+ (x+3)/(x+3)
lim x-> -3+ = 1

lim x-> -3- (-x-3)/(x+3)
im x-> -3- -(x+3)/(x+3)
im x-> -3- = -1

lim+ =/ lim -
SO it doesn't exist

Raghad Alenzi @ (بنات) 7 شعبة

بنات ترا سهل شوفو التجميعات

السؤال ذا مكرر بس اقروا الكلام اللي فوق وتطمنوا

🌝🧡

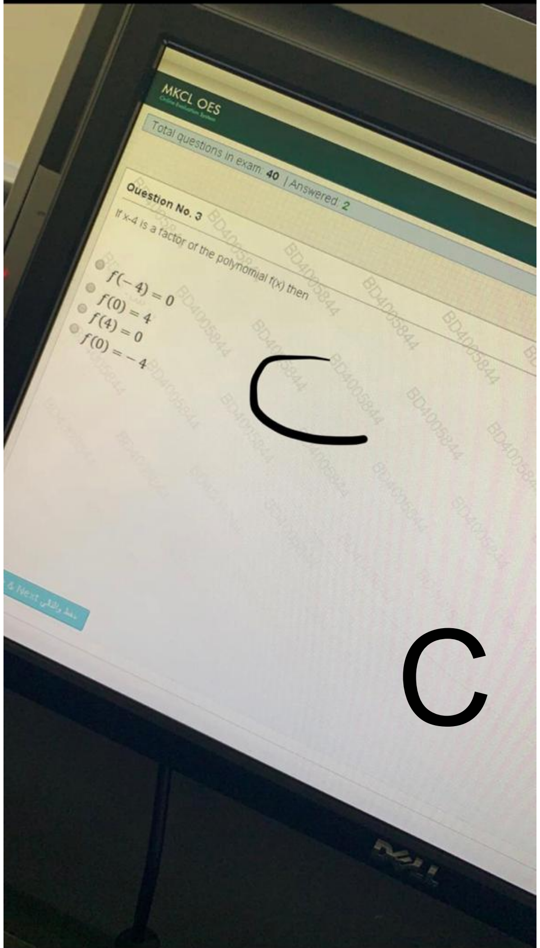
Total questions in exam: 40 | Answered: 32

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

C


MKCL OES
Total questions in exam 40 | Answered 2
Question No. 3
If x-4 is a factor of the polynomial f(x) then
$f(-4) = 0$
$f(0) = 4$
$f(4) = 0$
$f(0) = -4$
& Next
C

Math -Fina...

Question No. 22

A function is one-to-one if

- every horizontal line intersects the graph at most once
- every vertical line intersects the graph twice
- every horizontal line intersects the graph twice
- every vertical line intersects the graph at most once

A

Question No. 26

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

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

$^2 + c = x.x + 2x(X+1)$

$x^2+2x+1+c=x^2+2x$

نشيل الاجزاء المتشابهه

$=c+1$

$c=-1$

B

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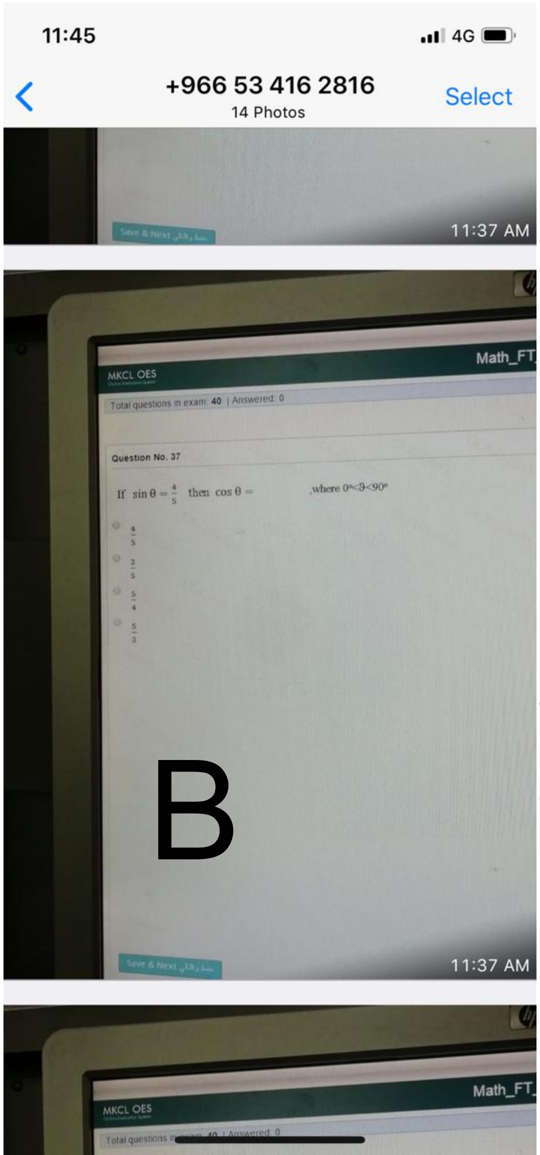


B

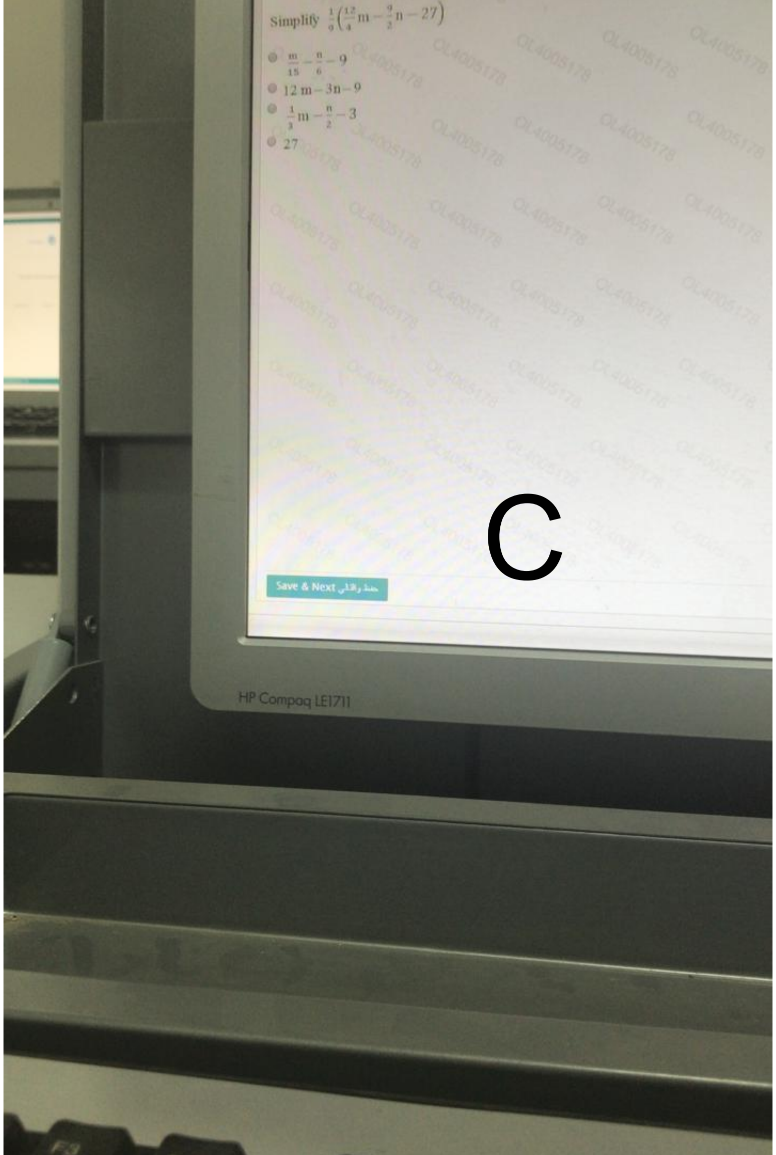
1-sin^2 = cos^2

1- (4/5)^2 = cos^2

9/25 = cos^2

√(9/25) = cos

cos = 3/5


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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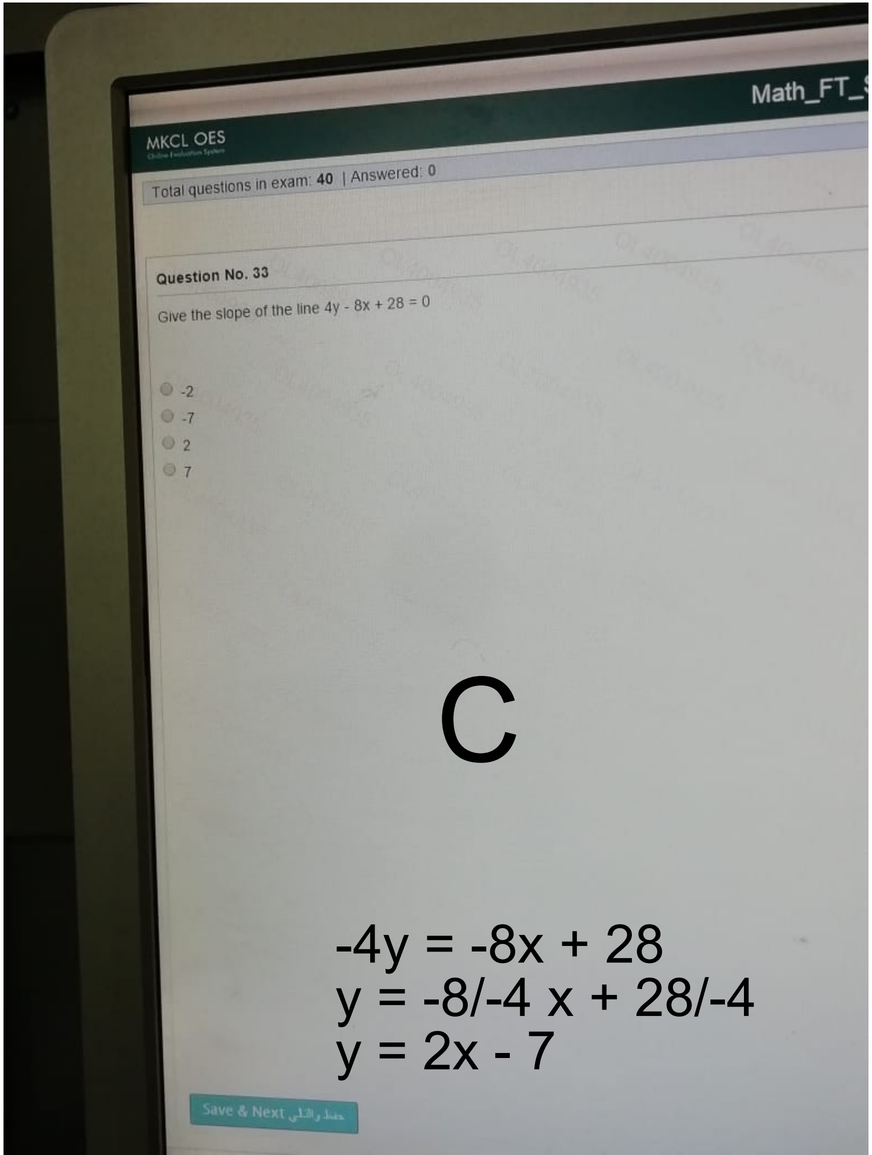

C

$-4y = -8x + 28$

$y = -8/-4\ x + 28/-4$

$y = 2x - 7$

$y = mx + b$

m is slope

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

logx y = z -> x^z=y

x^2 = 2x^2 - a^2

a^2 = x^2

x = a

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Math_FT_Sem1_2018

Total questions in exam: 40 | Answered: 35

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.

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

C

Question No. 38

The slope of the line x= -3 is

- -1
- Undefined
- 0
- 1

B

Question No. 11

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

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

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D

Cot = cos / sin
1-sin^2 = cos^2
1-(4/5)^2 = 9/25
√ 9/25 = 3/5
cot = (3/5)/(4/5) = 3/4

Question No. 24

Let a and b be nonzero real numbers. Find the inverse of the function $f(x) = \frac{a+bx}{b-ax}$.

- $f^{-1}(x) = \frac{bx-a}{ax-b}$
- $f^{-1}(x) = \frac{bx+a}{ax+b}$
- $f^{-1}(x) = \frac{ax+b}{bx-a}$
- $f^{-1}(x) = \frac{bx-a}{ax+b}$

D

x = a+by / b-ay (multiply by (b-ax))
x(b-ay) = a+by , bx - xay = a+by (let y togather)
bx - a = xay + by , bx-a = y(xa+bb) (devide by xa+b)
y = bx-a / ax+b

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

MKCL OES

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Math_

Total questions in exam: **40** | Answered: **22**

Question No. 38

If $f(x) = 1 - \sqrt{x+2}$, then the domain of $f^{-1}(x)$ is

- $(-\infty, 1]$
- $(-\infty, \infty)$
- $[1, \infty)$
- $[-2, \infty)$

A

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Online Evaluation System

Math_

Total questions in exam: **40** | 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

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Math_FT

Total questions in exam: 40 | Answered: 25

Question No. 24

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

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

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C

$$2a \leq 2x-2 \leq -2a$$
$$2a+2 \leq 2x \leq -2a+2$$
$$(2a+2)/2 \leq x \leq (-2a+2)/2$$
$$2(a+1)/2 \leq x \leq 2(-a+1)/2$$
$$a+1 \leq x \leq 1-a$$

estion No. 4

ssume that $z = -3 + 4i$ and $zw = -14 + 2i$. Find the value of w in the form $a + bi$, where $a, b \in \mathbb{R}$

$w = 2 + 2i$

$w = 50 - 50i$

$w = 2 - 2i$

$w = 50 + 50i$

A

By calculator

zw/z = w

(-14+2i)/(-3+4i)

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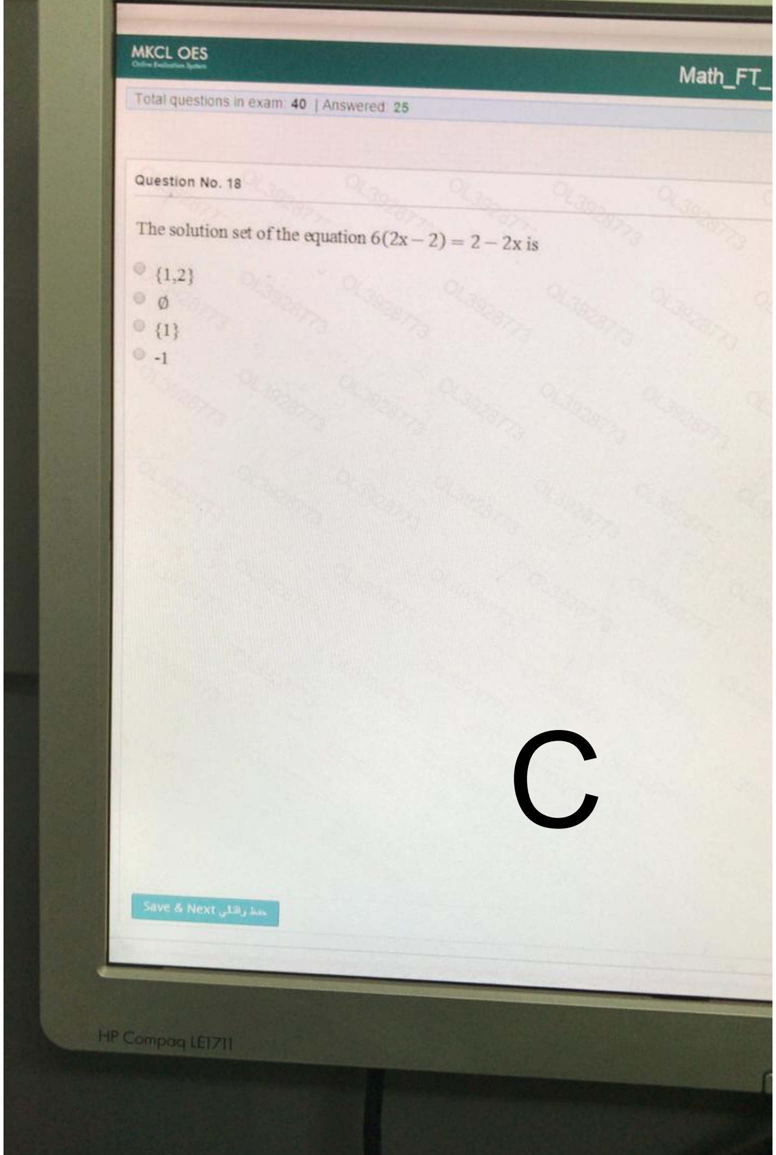
ompaq LE1711



C

$6(2x-2)=2-2x$
$12x-12=2-2x$
$12x + 2x = 12 + 2$
$14x = 14$, $x=1$

Question No. 35

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

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

A

L right =\ L left

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

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MKCL OES

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

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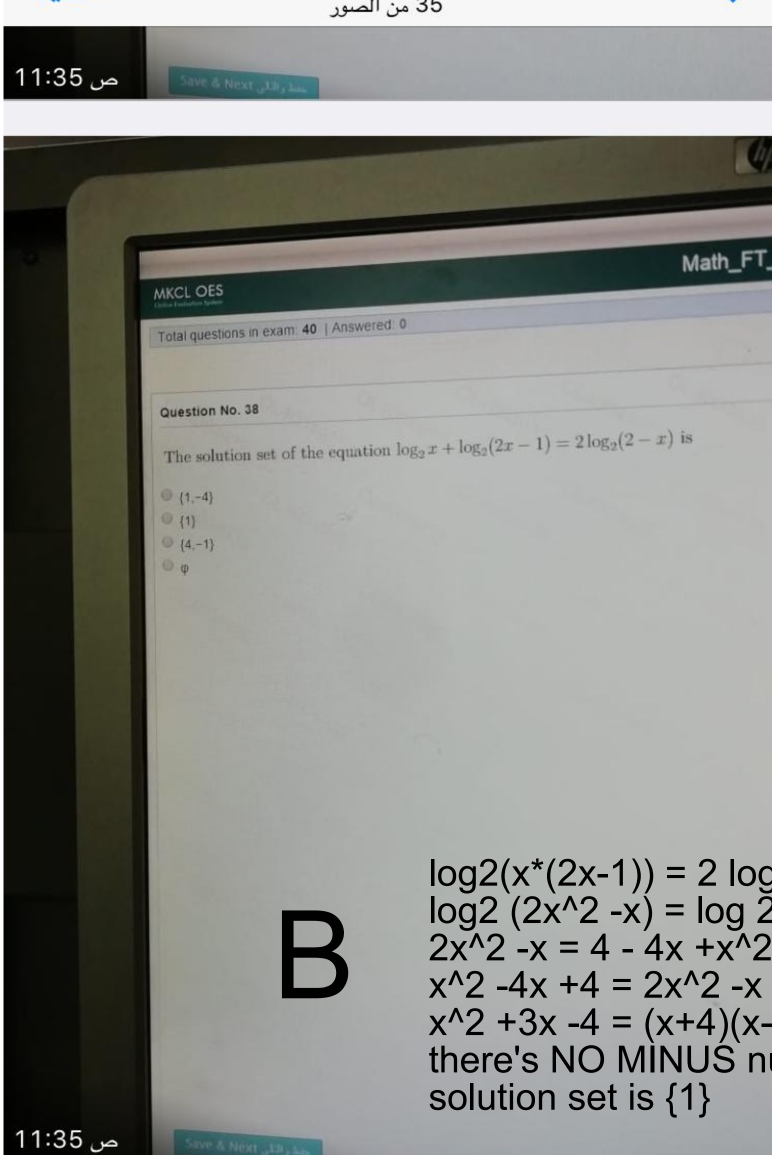

B

log2(x*(2x-1)) = 2 log2 (2-x)
log2 (2x^2 -x) = log 2 (2-x)^2
2x^2 -x = 4 - 4x +x^2 , (x-y)^2 property
x^2 -4x +4 = 2x^2 -x -> 2x^2 - x^2 -x +4x -4
x^2 +3x -4 = (x+4)(x-1) , x=-4 , x=1
there's NO MINUS number in log so the solution set is {1}

MKCL OES

Online Evaluation System

Total questions in exam 40 | Answered 5

Math_

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

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

Question No. 16

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

- 4
- 1
- -3
- 0

B

Let a be a complex number and $f(x) = x^4 - x^2 - 12$. If $x - a$ is a factor of $f(x)$ then

- $x + a$ is a factor of f too.
- $-x + a$ is a factor of f too.
- $-x - a$ is a factor of f too.
- $f(x + a) = 0$.

A

Conjugate:
x-a / x+a

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

Question No.

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

x^3 - y^3 = (x-y)(x^2+xy+y^2)

8y^3 = (2y)^3

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MKCL OES

Online Evaluation System

Total questions in exam: **25** | Answered: **8**

Question No. 4

Factor: $9 - 6cd + c^2d^2$

- $(3 + cd)(3 - cd)$
- $(3 + cd)\ (cd - 3)$
- $(3 - cd)^2$
- $(3 + cd)^2$

C

(x-y)^2 = x^2 -2xy -y^2

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Online Evaluation System

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

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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 $A \cup B'$

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

B

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

Question No. 3

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

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

C

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

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

B

B?

MKCL OES

Math_Quiz2_Sem2

Question No. 20

Given that $f(x) = 6x^3 + x^2 + 5x - 12$, then one of the following is a factor of $f(x)$

- x - 2
- x + 2
- x + 1
- x - 1

D

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D

X-1

Question No. 23

The inverse of $f(x) = \dfrac{\sqrt[3]{x} - 5}{2}$ is

- $f^{-1}(x) = (2x + 5)$
- $f^{-1}(x) = \dfrac{1}{3}(2x + 5)$
- $f^{-1}(x) = 3(2x + 5)$
- $f^{-1}(x) = (2x + 5)^3$

D

D

X = (3√‾y - 5)/2
2x = 3√‾y - 5
2x+5 = 3√‾y
(2x+5)^3 = y

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

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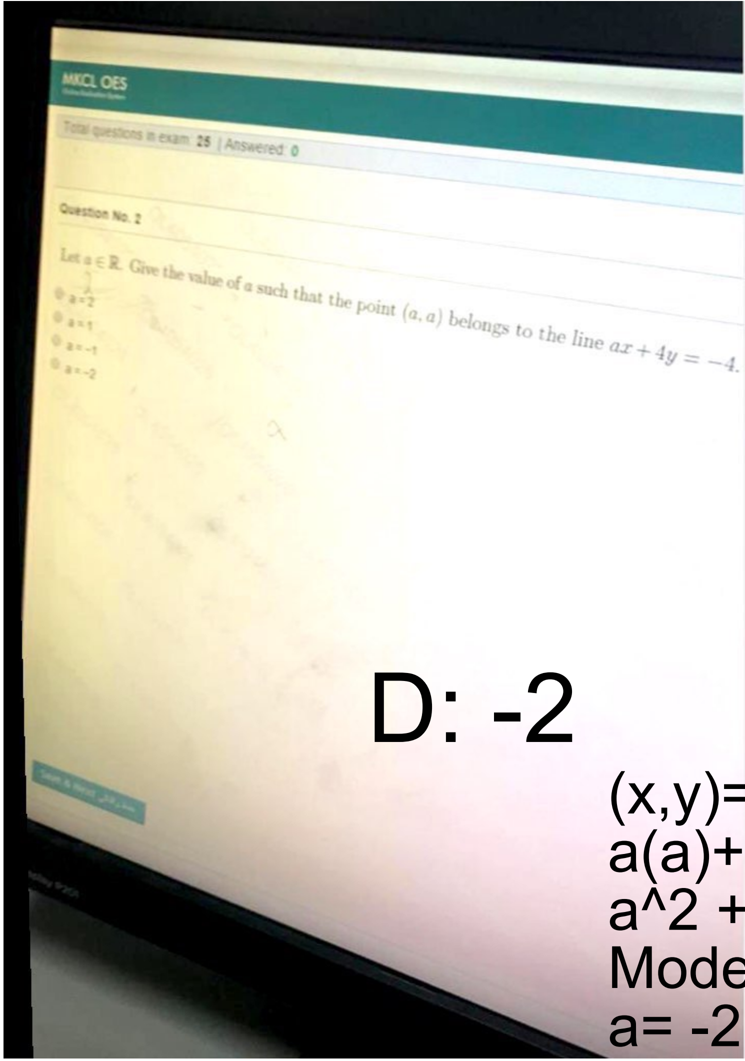

D: -2

(x,y)=(a,a)
a(a)+4a=-4
a^2 + 4a +4=0
Mode: 5,3
a= -2

Question No. 2

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

- -4
- 4
- 0
- -6

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A

If x-> 1

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

Ques

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: -7

Question No. 16

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

- 4
- 1
- -3
- 0

B

x^2+7x+12 = (x+3)(x+4)
(x+3)(x+4) / (x+3)
x + 4 = -3 + 4 = 1

Total questions in exam: **40** | Answered: **22**

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.

C

-3/2 x + 4 = 7

- 3/2 (2a) + 4 = 7

- 3/2 (2a) = 3

2a = -6/3 , 2a = -2

a = -1

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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

A

ab (1/a - 1/b)
توحيد المقامات
ab ((b-a)/ab)
b - a (ab is deleted with ab)

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

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

C

ax^2 , if a>0 then open up
if a < 0 then open down

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

C

3(-1)^4 + (-1) +1 / (-1+4)
3/3 = 1

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Online Evaluation System

Math_FT_

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

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

$$= 1+1$$

$$\boxed{= 2}$$

A

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MKCL OES

Math_FT

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

عند التعويض بعدد سالب

بيعطيك can't solve

$$\cancel{\log_2} x \cdot (2x-1) = \cancel{\log_2} (2-x)^2$$

$$2x^2 - x = 4 - 4x + x^2$$

$$-x^2 \qquad\qquad -x^2$$

$$x^2 = 4 - 4x + x$$

$$x^2 = 4 - 3x$$

$$x^2 + 3x - 4 = 0$$

$$\boxed{x = 1}, \boxed{x = -4}$$

b

$\cancel{\boxed{4}}$

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Math_FT_

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

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

Math_FT_

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

Question No. 30

Solve $1 < 7 - x < 10$

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

$1 < 7 - x < 10$

$-7 \quad -7 \quad\quad -7$

$-6 < -x < 3$

$6 > x > -3$

$\boxed{(-3, 6)} \longrightarrow \boxed{B}$

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Online Evaluation System

Math_FT

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

Question No. 40

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

- ○ Increasing
- ○ Constant
- ○ Decreasing and Increasing
- ○ Decreasing

$\boxed{A}$

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Online Evaluation System

Math_FT

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

Question No. 39

The supplement of the angle 50° is:

- 50°
- 150°
- 130°
- 40°

C

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Math_I

MKCL OES

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

C

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Math_FT

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

Question No. 23

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

- 9
- 6
- -3
- 4

A

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Math_FT

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

Question No. 25

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

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

$$\frac{\overset{2}{\cancel{6}}\,\overset{1}{\cancel{x^2}}}{2\,\underset{1}{\cancel{x^5}}} \cdot \frac{\overset{x}{\cancel{x^4}}}{\underset{1}{\cancel{3x}}} = \frac{2x}{2x} = \boxed{1}$$

$$\boxed{B}$$

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Math_FT

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

Question No. 24

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

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

$\log_2 3x = y \Longrightarrow 3x = 2^y$

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

A

Save & Next

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

Question No. 8

$\csc\theta =$

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

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

Question No. 5

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

- 1
- ∅
- {1,2}
- {5}

$14x - 7 = 14x + 9$

$-14x \qquad -14x$

$-7 = 9$

$\boxed{\emptyset} \rightarrow \boxed{B}$

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

Question No. 9

If θ is an acute angle in a right triangle, then $\tan\theta =$

- $\dfrac{\text{opposite}}{\text{hypotenuse}}$
- $\dfrac{\text{opposite}}{\text{adjacent}}$
- $\dfrac{\text{adjacent}}{\text{opposite}}$
- $\dfrac{\text{adjacent}}{\text{hypotenuse}}$

$\boxed{\text{B}}$

Math_F

MKCL OES

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

- $f(10) = -4$
- $f(-4) = 10$
- $f(4) = 10$
- $f(10) = 4$

$\boxed{\text{B}}$

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

Question No. 3

Evaluate $\lim_{x \to \infty} \left(x^4 - x^2 + x - 4 \right) =$

- -4
- 4
- 0
- ∞

D

MKCL OES

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Mat

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

Question No. 4

Find $2f(x) - 3g(x)$, where $f(x) = x^2 + 2x - 1$ and $g(x) = 2x - 4$.

- $2x^2 - 2x - 14$
- $-3x^2 - 2x - 1$
- $-3x^2 - 2x - 7$
- $2x^2 - 2x + 10$

$$(2x^2 + 4x - 2) - (6x - 12)$$

$$= 2x^2 - 2x + 10$$

$$\boxed{D}$$

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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

$$x^2-3x-2x+6$$

$$\boxed{x^2-5x+6}$$

Save & Next

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

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

- 4
- 1
- -3
- 0

b

$$\frac{\cancel{(x+3)}(x+4)}{\cancel{x+3}}$$

$x+4$

$-3+4 = \boxed{1}$

$\boxed{B}$

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

Question No. 30

The supplement of the angle 20° is:

- ○ 70°
- ○ 80°
- ○ 180°
- ○ 160°

D

11:25 AM

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

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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 $(\frac{1}{3}, 2)$

4+2log3(1 – 2x)

C

عوض محل الاكس ب 0 بيعطيك 4 وعوض محل الاكس ب سالب 1 بيعطيك 6 وعوض محل الاكس بثلث بيعطيك 2 فالجواب هو C

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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
- $\emptyset$
- $\{1,2\}$
- $\{5\}$

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

B

٥٨٦ / ٥٤.

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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

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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

انتبهوا في B ما تكررت الواي لاكن تكررت الاكس واذا تكررت الاكس معناتها انه ذي مو داله وليست one to one

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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: 15

Question No. 7

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

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

D

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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

- $\varnothing$
- {-3}
- {3}
- {-3,3}

C

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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

Total questions in exam: 40 | Answered: 5

Question No. 14

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

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

C

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MKCL OES

Math

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

Question No. 39

The supplement of the angle 50° is:

- 50°
- 150°
- 130°
- 40°

C

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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

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

Question No. 39

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

- $\emptyset$
- $\{0\}$
- $\{1,2\}$
- $\{1,2,3\}$

C

MKCL OES

Online Evaluation System

Total questions in exam: 40 | Answered: 11

Question No. 9

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

- -2
- 0
- 2
- Does not exist

D

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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

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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

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Online Evaluation System

Total questions in exam: 40 | Answered: 11

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Question No. 23

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

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

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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Online Evaluation System

Ma

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

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Online Evaluation System

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

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

Save & Next

Online Evaluation System

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

Question No. 3

Evaluate $\lim_{x\to\infty}\left(x^4 - x^2 + x - 4\right) =$

- -4
- 4
- 0
- ∞

D

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

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 $\tan\theta =$

- $\frac{\text{opposite}}{\text{hypotenuse}}$
- $\frac{\text{opposite}}{\text{adjacent}}$
- $\frac{\text{adjacent}}{\text{opposite}}$
- $\frac{\text{adjacent}}{\text{hypotenuse}}$

B

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
- $\emptyset$
- $\{1,2\}$
- $\{5\}$

B

MKCL OES

Online Evaluation System

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

Online Evaluation System

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. 28

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

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

C

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 حفظ والتالي

MKCL OES

Online Evaluation System

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

Question No. 39

The supplement of the angle 50° is:

- 50°
- 150°
- 130°
- 40°

C

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

Online Evaluation System

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

Question No. 33

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

- -2
- -7
- 2
- 7

C

MKCL OES

Online Evaluation System

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

Question No. 34

Evaluate $\lim\limits_{x \to 1^{+}} \dfrac{x^2 - 1}{|x - 1|}$

- 2
- 6
- -2
- 1

A

Online Evaluation System

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 حفظ والتالي

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 حفظ والتالي

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. 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

Save & Next حفظ وتالي

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

+966 59 372 4422

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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

MKCL OES

Online Evaluation System

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

HP Compaq LE2002x

Question No. 2

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

- -4
- 4
- 0
- -6

A

Save & Next حفظ والتالي

MKCL OES
Online Evaluation System

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 حفظ وتالي

Compaq LE1711

.Dr.Shadi 🤓 @ Plan (A)

باحث مقدمة في الرياضيات طلاب و طالبات النهائي • ورقتان ٢

MKCL OES

Question No. 33

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
- 1
- 3

$$\lim_{x\to 1}\frac{x^2-1}{x-1} \quad \frac{(x+1)\cancel{(x-1)}}{\cancel{x-1}}$$

$1+1=2$

B

MKCL OES

Question No. 1

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

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

B

Save & Next حفظ والتالي

MKCL OES

Question No. 3

The solution set of the equation $e^{2x} = 1$ is

- $\emptyset$
- $\{1\}$
- $\{0\}$
- $\left\{\frac{1}{2}\right\}$

C

Save & Next

MKCL OES

Question No. 4

Given that $f(x) = 3^{2x+1} - 1$. Then $f(-1) =$

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

B

Save & Next حفظ والتالي

MKCL OES

Question No. 6

The solution of the exponential equation $\left(\frac{3}{2}\right)^{2x+1} = \frac{4}{9}$ is

- $x = \frac{1}{2}$
- $x = \frac{3}{2}$
- $x = \frac{-3}{2}$
- $x = \frac{4}{9}$

C

Save & Next حفظ وتالي

MKCL OES

Question No. 7

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

- Undefined
- 0
- -2
- $\frac{1}{2}$

A

Save & Next حفظ والتالي

MKCL OES

Question No. 8

The domain of the function $f(x) = 1 - \log_4(x - 2)$ is

- $(0, \infty)$
- $(-\infty, 2)$
- $(-\infty, \infty)$
- $(2, \infty)$

D

Save & Next حفظ والتالي

Question No. 9

For $x > 0,\ y > 0, and\ z > 0,\ \log_2\left(\frac{xy^2}{2\sqrt{z}}\right) =$

- $-1 + \log_2 x + 2\log_2 y - \frac{1}{2}\log_2 z$
- $1 + \log_2 x + 2\log_2 y - \frac{1}{2}\log_2 z$
- $-1 + \log_2 x + \log_2 y - \frac{1}{2}\log_2 z$
- $-1 + \log_2 x + 2\log_2 y + \frac{1}{2}\log_2 z$

Save & Next

MKCL OES

Question No. 17

The solution set of an identity equation is

- the set of natural numbers
- the set of real numbers
- the empty set
- the set of some numbers that satisfy the equation

B

Save & Next حفظ والتالي

MKCL OES

Question No. 18

The quotient $\frac{2-3i}{4-3i}$ can be written as

- $-\frac{17}{25}+\frac{6}{25}i$
- $\frac{17}{25}+\frac{6}{25}i$
- $\frac{17}{25}-\frac{6}{25}i$
- $-\frac{17}{25}-\frac{6}{25}i$

C

Save & Next

MKCL OES

Question No. 19

Solve: $6x^2 + 7x - 3 = 0$

- $x = 2 + i \quad or\ x = 2 - i$
- $x = 3 \quad or \quad x = -1$
- $x = \frac{1}{3} \quad or\ x = \frac{-3}{2}$
- $x = \frac{3}{2} \quad or\ x = -\frac{1}{3}$

C

Save & Next

Question No. 20

Solve $x^2 + x < 6$

- $(-\infty, -2) \cup (3, \infty)$
- $(-2, 3)$
- $(-3, 2)$
- $(-\infty, -3) \cup (2, \infty)$

C ~~B~~

Save & Next حفظ والتالي

Question No. 21

The solution set of the following equation: $|\ x+1\ |=|2x-3|$ is

- $\left\{4, \frac{2}{3}\right\}$
- $\left\{-4, \frac{2}{3}\right\}$
- $\left\{4, -\frac{2}{3}\right\}$
- ϕ

A

MKCL OES

Question No. 22

If $f(x) = \dfrac{3}{x^2 + x + 1}$ then $f(-2) =$

- 1
- 0
- not defined
- -1

A

Save & Next حفظ والتالي

MKCL OES

Ma

Question No. 23

Give the y-intercept of the line y= 4x-7

- -7
- 7
- 4
- -4

A

Save & Next حفظ و التالي

Math

MKCL OES

Question No. 24

Find the equation of the line passes through the two points (2,3) and (1,-4).

- $y=7x-11$
- $y = 3x - 12$
- $y =-3x + 12$
- $y=-7x + 11$

A

Save & Next

MKCL OES

Question No. 25

Let $f(x) = \dfrac{2}{x+5}$ and $g(x) = x - 5$, then $(f \circ g)(x) =$

- $\dfrac{1}{x}$
- $\dfrac{2}{x}$
- $\dfrac{2}{x-1}$
- $\dfrac{2}{x+1}$

B

Save & Next حفظ والتالي

Question No. 26

Let $f(x) = x^2 + x + 2$ and $g(x) = x - 1$, then the domain of $(f+g)(x)$ is

- $[-\infty, 1]$
- $[-\infty, 0]$
- $(0, 9)$
- $(-\infty, \infty)$

D

Save & Next حفظ والتالي

MKCL OES

Maths

Question No. 27

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

- Cubic
- Linear
- Quadratic
- Quartic

C

Save & Next حفظ والتالي

Question No. 28

If $f(x) = -(x+3)^2 + 5$, then the vertex of the graph of f is

- (-3,5)
- (-3,-5)
- (3,5)
- (-1,-5)

A

Save & Next حفظ والتالي

Question No. 29

The quotient of the division $(2x^3 + 4x^2 - 5x + 7) \div (x - 2)$ is:

- $3x^2 - x + 3$
- $2x^2 - x - 11$
- $3x^2 + x + 3$
- $2x^2 + 8x + 11$

D

Save & Next

Question No. 30

The degree of the quotient of the division:

$$(2x^7 - 6x^5 + 3x - 5) \div (x + 8) \text{ equals:}$$

- 9
- 8
- 7
- 6

D

Save & Next حفظ والتالي

MKCL OES

Ma

Question No. 31

If x-1 is a factor of the polynomial f(x) then

- $f(0) = -1$
- $f(1) = 0$
- $f(-1) = 0$
- $f(0) = 1$

B

Save & Next حفظ و التالي

MKCL OES

Question No. 32

Which of the following functions is one to one

- F= {(-3,123), (0, 10), (4,-12), (1,-15)}
- F= {(-3,-2), (0, 4), (3,-2), (1,-5)}
- F= {(3, 15), (6, 10), (3,-12), (1, 15)}
- F= {(4, 6), (1, 0), (5,-2), (1, 6)}

A

Save & Next حفظ والتالي

MKCL OES

Question No. 34

If f(x) = 2x + 4, then

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

C

Save & Next حفظ والتالي

MKCL OES

Question No. 35

If $0^{\circ} < \theta < 90^{\circ}$ then θ is called

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

C

Save & Next حفظ والتالي

MKCL OES

Question No. 36

The complement of the angle 60° is:

- 140°
- 30°
- 120°
- 70°

B

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MKCL OES

Question No. 37

The supplement of the angle 50° is:

- 130°
- 50°
- 40°
- 150°

A

Save & Next حفظ والتالي

MKCL OES

Question No. 38

If θ is an acute angle in a right triangle, then $\tan\theta =$

- $\dfrac{\text{adjacent}}{\text{opposite}}$
- $\dfrac{\text{opposite}}{\text{hypotenuse}}$
- $\dfrac{\text{adjacent}}{\text{hypotenuse}}$
- $\dfrac{\text{opposite}}{\text{adjacent}}$

D

Save & Next

MKCL OES

Ma

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

Save & Next حفظ وتالي

MKCL OES

Question No. 40

The expression $(\cos^2\theta + \sin^2\theta)$ equals

- $\sec^2\theta$
- -1
- 1
- $\csc^2\theta$

C

Save & Next

MKCL OES

Question No. 10

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

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

* بالتعويض:

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

$$\boxed{B}$$

Save & Next حفظ والتالي

Question No. 14

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

- -20
- -5
- 0
- -1

درجة المقام اكبر من درجة البسط = 0

$\boxed{C}$

Save & Next حفظ والتالي

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 = نقسم المعاملات

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

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

Save & Next

MKCL OES
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

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

$\boxed{C}$

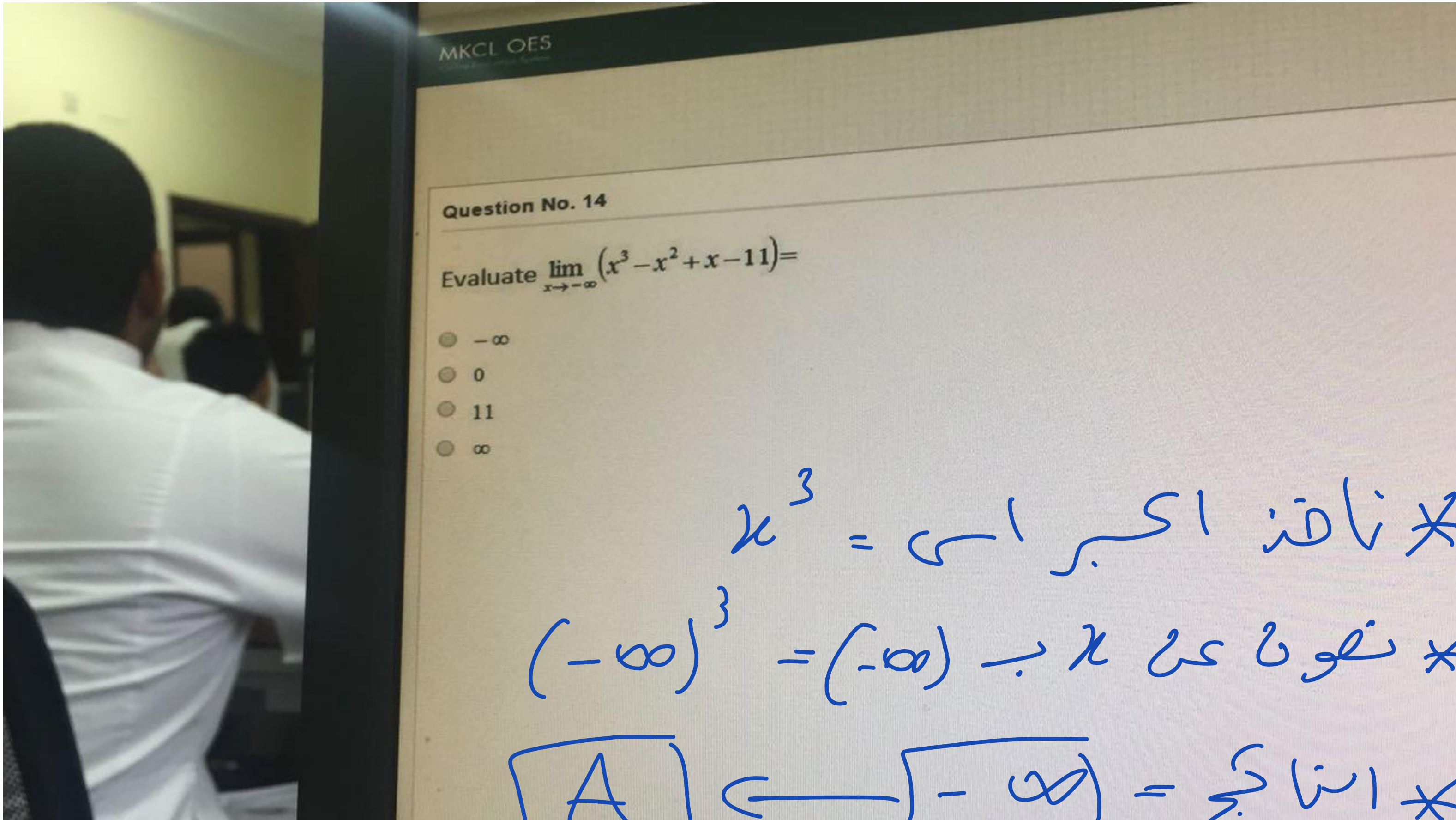
Save & Next حفظ والتالي

Question No. 13

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

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

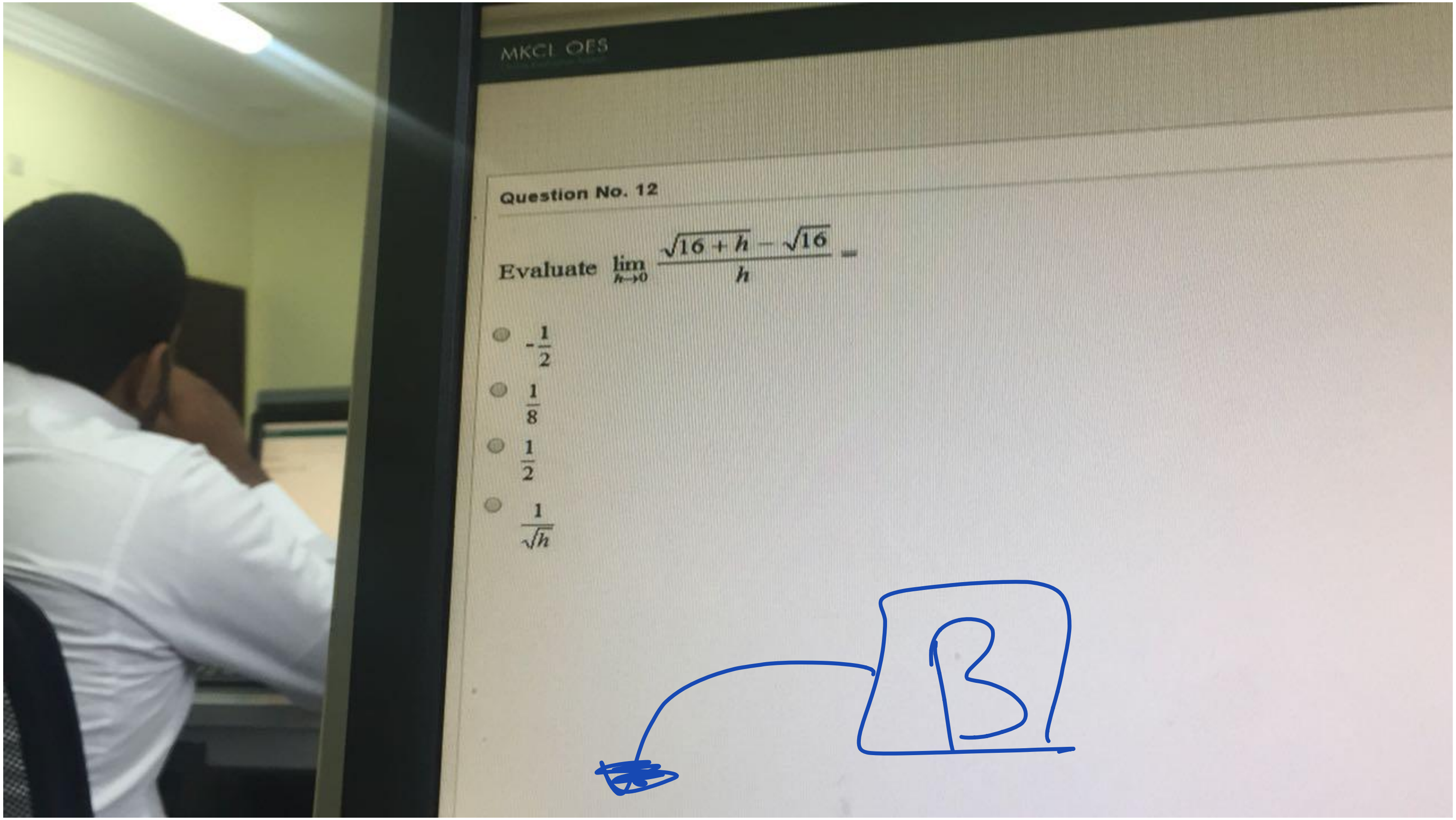
B



* ناخذ اكبر اس = x^3

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

* الناتج = $\boxed{-\infty} \leftarrow \boxed{A}$


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:

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

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

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

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

* 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

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

Question No. 14

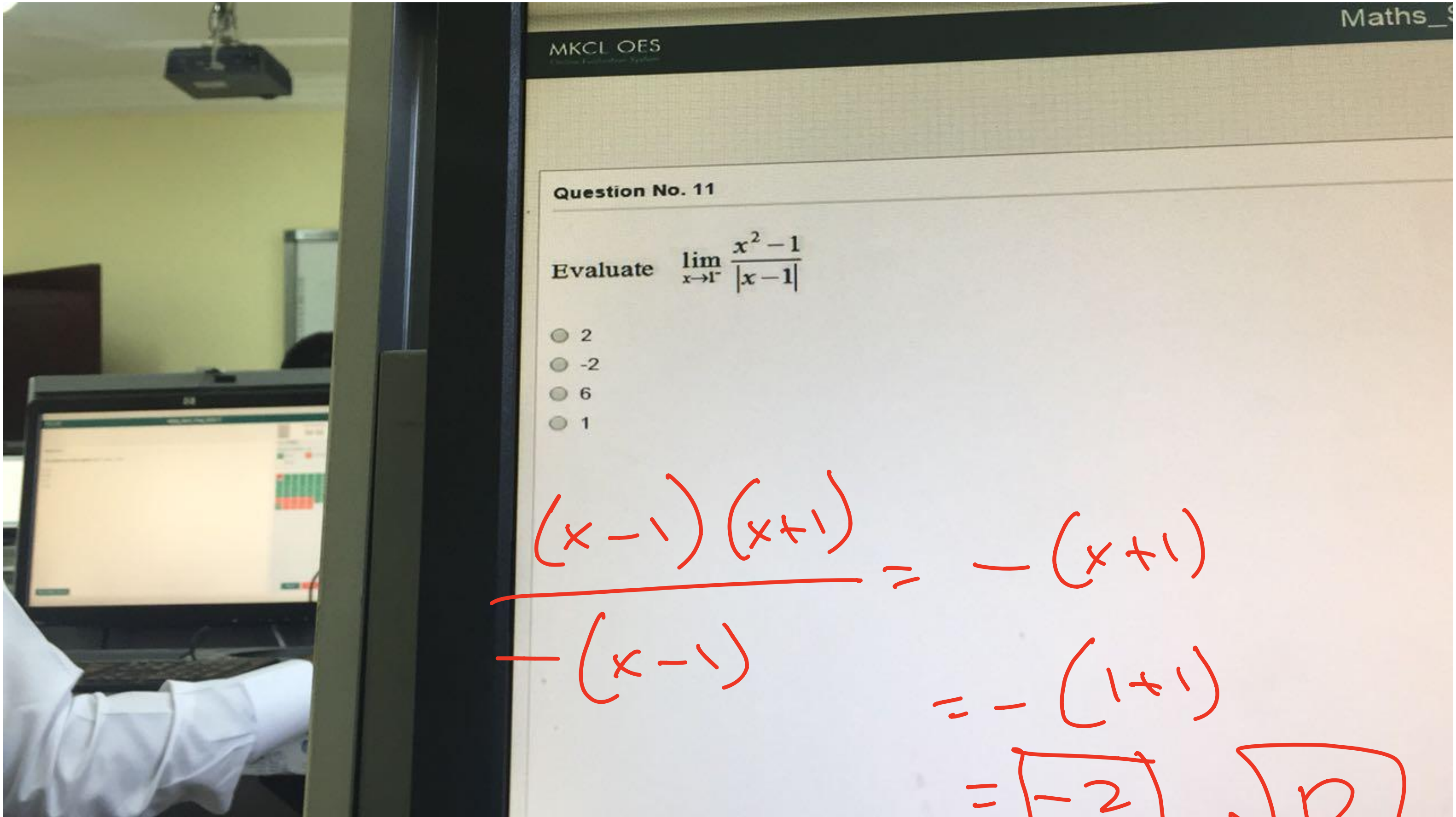
Evaluate $\lim_{x \to \infty} \frac{x^3+x^2+x+1}{x^3+3x^2+5x+2} =$

- 2
- 4
- 3
- 1

$\boxed{D}$

Save & Next حفظ والتالي

mpaq LE1711



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

$$= -(1+1)$$

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

MKCL OES

Online Evaluation System

Question No. 12

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

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

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

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

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

$\boxed{124}$ = بالتعويض

A

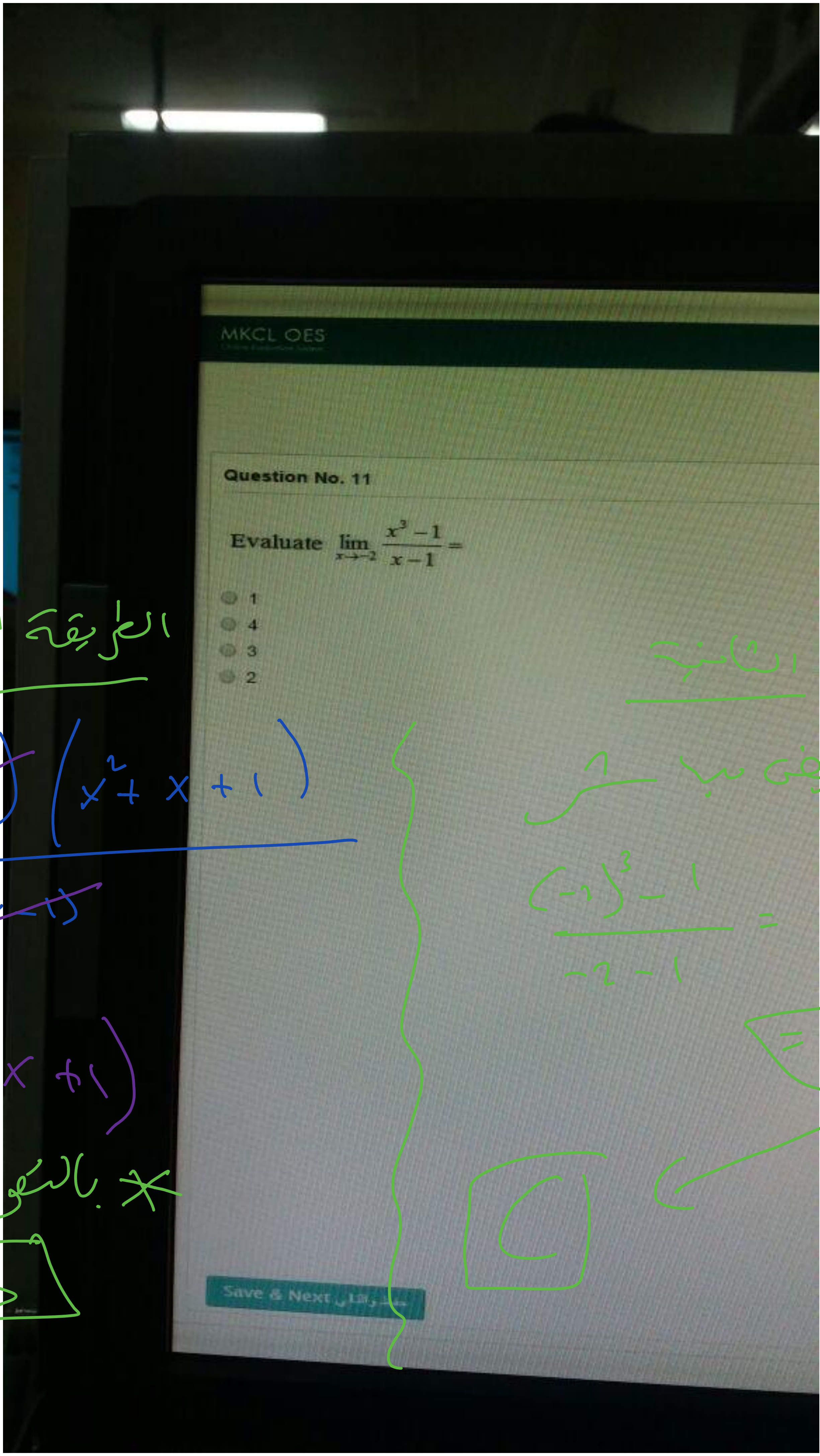
MKCL OES

Online Evaluation System

Question No. 13

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

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



الطريقة الدوسي

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

(x^2+x+1)

بالتعويض x

$\boxed{=3}$

الثانية

تعويض مباشر

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

$= 3$

$\boxed{c}$

MKCL OES

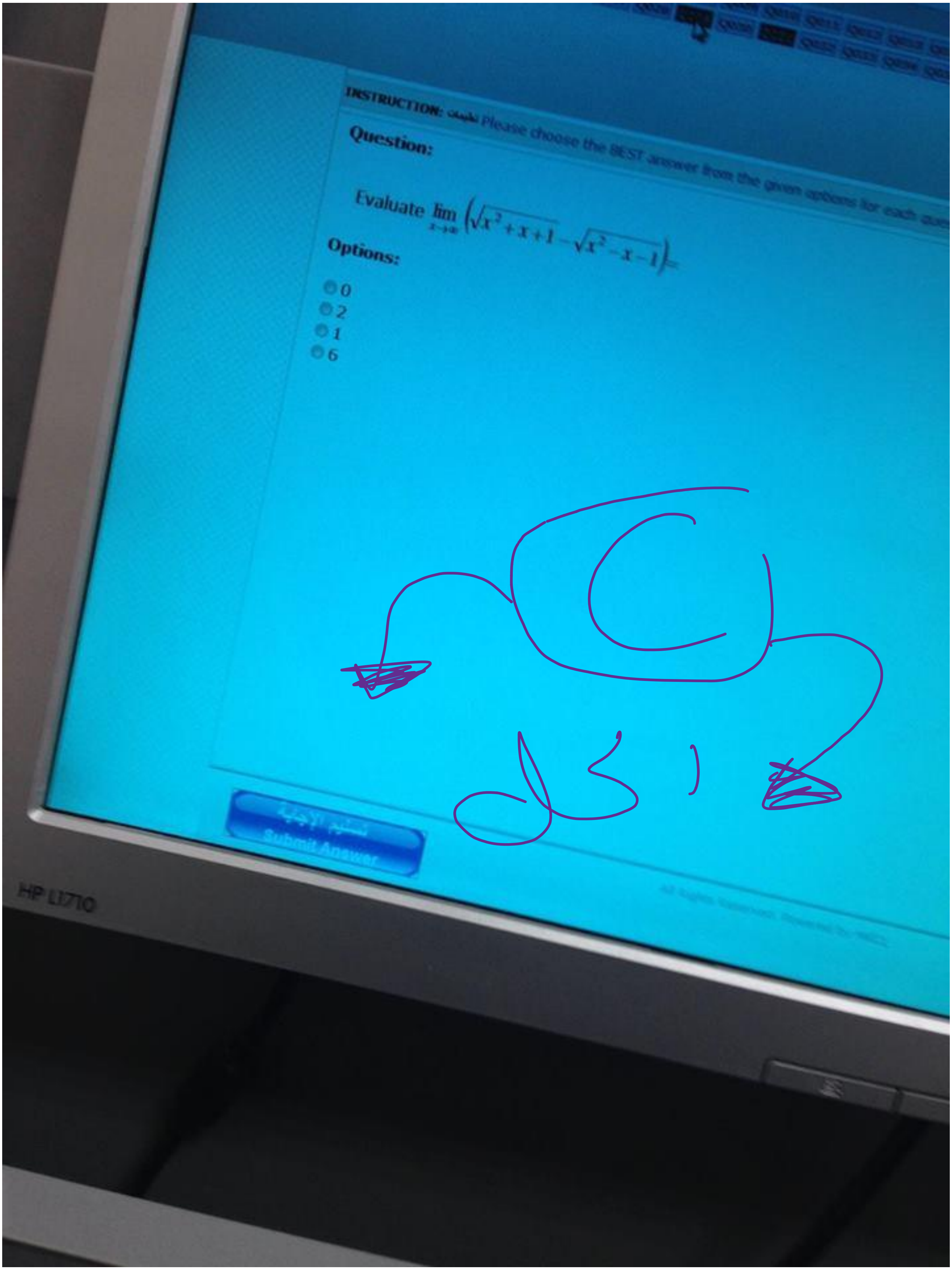
Question No. 13

Evaluate $\lim\limits_{x\to\infty} \dfrac{x^4+2x^2-1}{x^3-2x-2} =$

- $-\infty$
- ∞
- 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 =

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

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

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

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

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

درجة البسط = درجة المقام

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

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

$\boxed{\text{DNE}}$

B

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

اي قيمة مطلقة = $\boxed{\text{DNE}}$

D

تسليم الإجابة
Submit Answer

Question No. 17

The equation 6 (2x - 3) = 12x + 3 is

- a contradiction
- a conditional equation
- a quadratic equation
- an identity

A

Question No. 13

Evaluate $\lim\limits_{x\to\infty} \dfrac{x^4+2x^2-1}{x^3-2x-2} =$

- $-\infty$
- ∞
- 1
- 0

B

Save & Next حفظ والتالي

Question No. 11

Evaluate $\lim\limits_{x \to -2} \dfrac{x^3 - 1}{x - 1} =$

- 1
- 4
- 3
- 2

C

Save & Next سجل والتالي

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
- 0
- 4
- 2

B

Save & Next

Question No. 21

The solution set of the following equation: $|x+1|=|2x-3|$ is

- $\left\{4,\frac{2}{3}\right\}$
- $\left\{-4,\frac{2}{3}\right\}$
- $\left\{4,-\frac{2}{3}\right\}$
- ϕ

A

Question No. 12

Evaluate $\lim_{h \to 0} \frac{\sqrt{16+h} - \sqrt{16}}{h} =$

- $\frac{1}{8}$
- $-\frac{1}{2}$
- $\frac{1}{\sqrt{h}}$
- $\frac{1}{2}$

A

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Question No. 14

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

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

A

Save & Next

Question No. 30

The degree of the quotient of the division

$$(7x^4 - 4x^3 + 6x - 5) \div (x + 2) \text{ equals:}$$

- 6
- 5
- 4
- 3

D

Save & Next حفظ والتالي

Question No. 19

Solve: $x^2 - 6x + 13 = 0$

- $x = 3 \pm \sqrt{2}$
- $x = 3 \pm i\sqrt{2}$
- $x = 3 \pm 2i$
- $x = \frac{3}{2} \pm \frac{\sqrt{3}}{2}$

C

Save & Next حفظ والتالي

Question No. 38

If $\csc\theta = 5$ then $\sin\theta =$

- $\frac{\sqrt{26}}{26}$
- $\frac{1}{5}$
- 5
- $\frac{5\sqrt{26}}{26}$

B

Question No. 17

The equation 6 (x - 2) = 2 - x is

- an identity
- a conditional equation
- a contradiction
- a quadratic equation

B

Question No. 23

The slope of the vertical line is

- -1
- undefined
- 1
- 0

B

Question No. 9

For $x > 0$, $\log_3 x^3 - \log_3 \sqrt{x} + 5\log_3 x =$

- $\frac{7}{2}\log_3 x$
- $\frac{15}{2}\log_3 x$
- $15\log_3 x$
- $\log_3 x$

B

Save & Next حفظ والتالي

Question No. 9

For $x > 0,\ y > 0, and\ z > 0,\ \log_5\left(\frac{x^2 y^3}{125\sqrt[3]{z}}\right) =$

- $2\log_5 x + 3\log_5 y - 3 - \frac{1}{3}\log_5 z$
- $2\log_5 x + 3\log_5 y - 3 + \frac{1}{3}\log_5 z$
- $2\log_5 x - 3\log_5 y - 3 + \frac{1}{3}\log_5 z$
- $2\log_5 x + 3\log_5 y - \frac{125}{3}\log_5 z$

A

Save & Next حفظ والتالي

Question No. 17

The solution set of a contradiction equation is

- the set of some numbers that satisfy the equation
- the empty set
- the set of real numbers
- the set of natural numbers

B

Save & Next حفظ والتالي

Question No. 7

The equation $x = 2 - \log_3 y$ is equivalent to the equation

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

D

Next حفظ والتالي

Question No. 7

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

- Undefined
- 0
- -2
- $\frac{1}{2}$

A

Save & Next

Question No. 2

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

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

C

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Question No. 22

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

- a^2+2a-4
- a^2+2a+3
- a^2+a-3
- a^2+2a-7

C

Save & Next

MKCL OES

Maths_Sem1_Final_

Question No. 11

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

- 2
- -2
- 6
- 1

B

MKCL OES

Online Evaluation System

Question No. 13

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

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

C

MKCL OES

Online Evaluation System

Question No. 24

Find the equation of the line with slope –3 and y-intercept –5.

- ○ $-5x - 3y = 0$
- ● $y = -5x - 3$
- ○ $x - 3y = -5$
- ○ $y = -3x - 5$

D

Save & Next

Question No. 2

Given that $\log_3(2x-4)=1$ then $x=$

- $\frac{3}{7}$
- $\frac{7}{2}$
- $\frac{7}{3}$
- $\frac{2}{7}$

B

Question No. 26

If $f(x) = 3x + 4$ and $g(x) = x - 1$, then the domain of $\left(\frac{g}{f}\right)(x)$ is

- $(-\infty, 0) \cup (0, \infty)$
- $(-\infty, 1) \cup (1, \infty)$
- $(-\infty, \infty)$
- $\left(-\infty, \frac{-4}{3}\right) \cup \left(\frac{-4}{3}, \infty\right)$

D

Save & Next حفظ والتالي

Question No. 23

The slope of the horizontal line is

- 1
- undefined
- 0
- -1

C

Save & Next حفظ والتالي

Question No. 34

A function f(x) is one to one if

- $a \neq b \Rightarrow f(a) \neq f(b)$
- $a = b \Rightarrow f(a) \neq f(b)$
- $f(a) = f(b) \Rightarrow a \neq b$
- $a \neq b \Rightarrow f(a) = f(b)$

A

Save & Next حفظ والتالي

Question No. 1

The solution of the equation $3^x = 5$ is

- $\ln(\frac{5}{3})$
- $\frac{\ln 3}{\ln 5}$
- $\ln(\frac{3}{5})$
- $\frac{\ln 5}{\ln 3}$

D

Save & Next

Question No. 28

The interval where the graph of $f(x) = -x^2 + 4x - 8$ decreases is

- $[-8, \infty)$
- $[2, \infty)$
- $(-\infty, 2]$
- $(-\infty, \infty)$

B

Save & Next حفظ والتالي

Question No. 40

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

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

C

Question No. 4

The range of the function $f(x) = 1 + 2^{5x}$ is

- $(1, \infty)$
- $(2, \infty)$
- $(0, \infty)$
- $(-\infty, \infty)$

A

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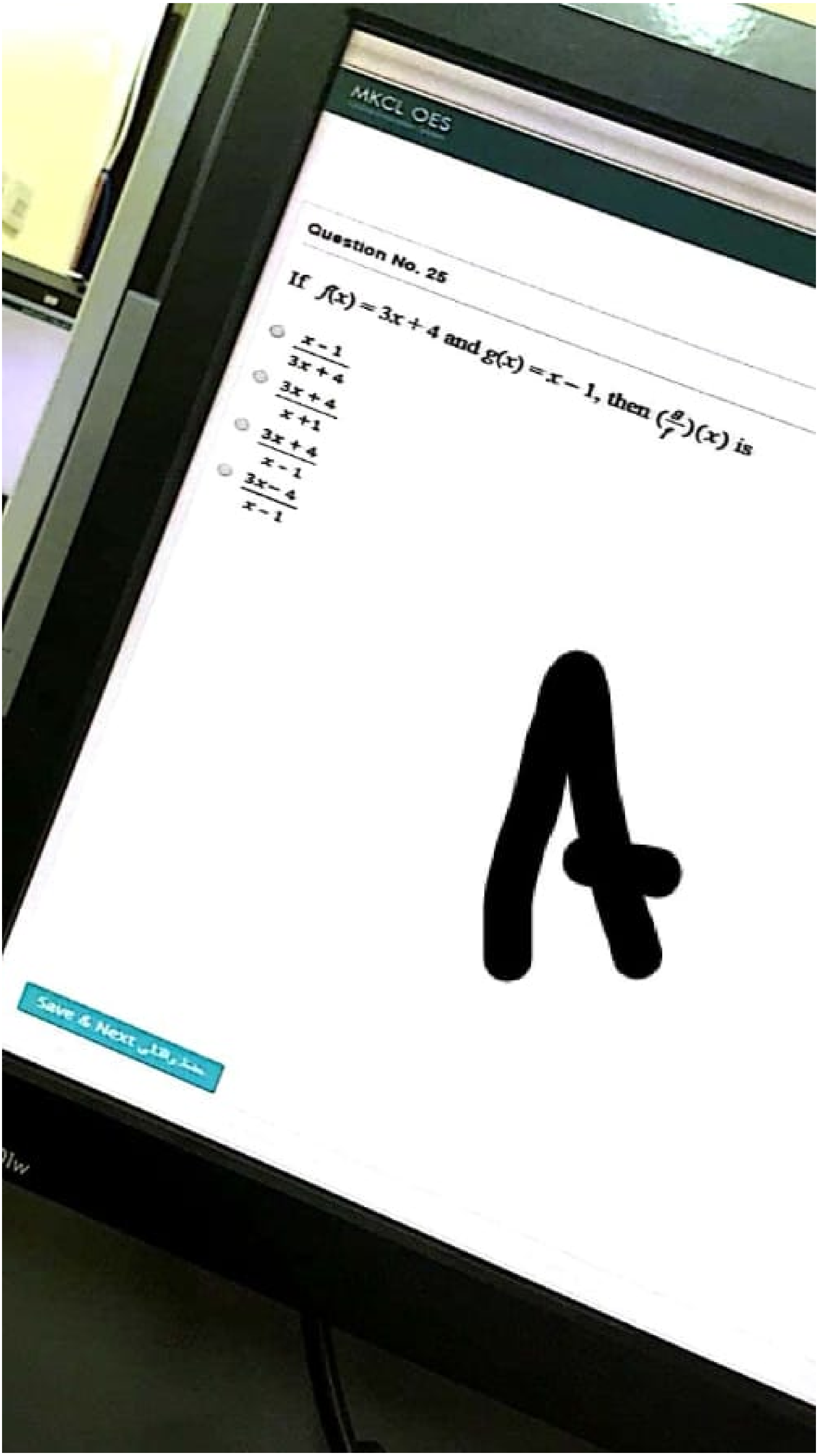
Question No. 8

The graph of $f(x) = \log_{\frac{1}{4}} x$ is

- Increasing
- Decreasing and Increasing
- Constant
- Decreasing

D

Save & Next


MKCL OES
Question No. 25
If $f(x) = 3x + 4$ and $g(x) = x - 1$, then $(\frac{g}{f})(x)$ is
$\frac{x-1}{3x+4}$
$\frac{3x+4}{x+1}$
$\frac{3x+4}{x-1}$
$\frac{3x-4}{x-1}$
A
Save & Next

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

- Decreasing
- Decreasing and Increasing
- Constant
- Increasing

D

Question No. 26

Let $f(x)=x^2+x+2$ and $g(x)=x-1$, then the domain of $(f-g)(x)$ is

- $(-\infty,\infty)$
- $(0,9)$
- $[-x,0]$
- $[-x,1]$

A

Save & Next حفظ وتالي

Question No. 7

The equation $x = 3^y - 1$ is equivalent to the equation

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

D

Save & Next حفظ والتالي

Question No. 7

The equation $x = 2 - \log_3 y$ is equivalent to the equation

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

D

Next حفظ والتالي

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Question No. 28

The vertex of the graph of $f(x) = x^2 - 4x + 5$ is

- (2,-1)
- (2,1)
- (-1,2)
- (0,4)

B

Save & Next حفظ والتالي

Question No. 9

The solution of the logarithmic equation $\log_x \frac{27}{8} = 3$ is

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

D

Question No. 23

Given the equation 2x – 5y = 10 .Write the line equation in the slope-intercept form.

- $y=\frac{2}{5}x-20$
- $y=-\frac{2}{5}x+2$
- $y=\frac{2}{5}x-2$
- $y=-\frac{2}{5}x+20$

C

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Question No. 38

If $\cot\theta = \frac{2}{3}$ then $\tan\theta =$

- $\frac{2\sqrt{13}}{13}$
- $\frac{2}{3}$
- $\frac{3}{2}$
- $\frac{3\sqrt{13}}{13}$

C

Save & Next حفظ والتالي

Question No. 3

The solution set of the equation $e^{2x} - 3e^{x} - 4 = 0$ is

- $\{\ln 2\}$
- $\{\ln 4\}$
- $\{1\}$
- $\{\ln 4, -1\}$

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

D

Save & Next حفظ والتالي

Question No. 2

Given that $3 \ln x = 30$ then $x =$

- e^{10}
- e^{30}
- e^{15}
- e^{5}

A

Save & Next حفظ والتالي

Question No. 38

If $\cos\theta = \frac{4}{5}$ then $\sec\theta =$

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

C

Save & Next حفظ والتالي

Question No. 20

Solve $\frac{x}{x+2} \geq \frac{3}{x+2}$

- $(-\infty, -2) \cup [3, \infty)$
- $(-\infty, 2) \cup [3, \infty)$
- $(-\infty, -2) \cup (3, \infty)$
- $(-\infty, 2) \cup (3, \infty)$

A

Question No. 32

The inverse of F = {(-10, 20), (0, 0), (4, 2), (1, 5)} is

- {(-10,20), (0,0), (-4,2), (-1,5)}
- {(-10, 20), (0, 0), (2, 4), (1, 5)}
- {(-10, 20), (0,0), (4,-2), (1,-5)}
- {(20,-10), (0,0), (2,4), (5,1)}

D

Question No. 18

Simplifying the power of i^{13} gives

- -i
- -1
- 1
- i

i

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Maths_Sem1_Final_

Question No. 11

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

- 2
- -2
- 6
- 1

B

Question No. 38

The complement of the angle 60° is:

- 140°
- 30°
- 120°
- 70°

B

Save & Next

Question No. 8

The vertical asymptote to the graph of $f(x) = 2 - \log_5(x - 3)$

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

X=3

Save & Next

Question No. 6

The solution of the exponential equation $2^{3x-1} = \left(\frac{1}{4}\right)^{1-x}$ is

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

C

Save & Next حفظ والتالي

Question No. 37

The supplement of the angle 50° is:

- 130°
- 50°
- 40°
- 150°

A

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Question No. 36

The complement of the angle 20° is:

- 70°
- 160°
- 80°
- 180°

A

Question No. 2

The linear equation in one variable can be written in the form

- $ax + b = 0$, where a and b are real numbers with $a = 0$
- $ax + b = 0$, where a and b are real numbers with $a \neq 0$
- $ax^2 + b = 0$, where a and b are real numbers with $a \neq 0$
- $ax^2 + bx + c = 0$, where a, b and c are real numbers with $a \neq 0$

B

Question No. 3

Simplify and write in the standard form of a complex number

$$\frac{-5}{i}$$

- -5
- 5
- 1-5i
- 5i

D

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Solve: $2x^2 = x - 4$

- $\{\frac{1}{4}(-1 \pm i\sqrt{31})\}$
- $\{\frac{1}{3}(-1 \pm i\sqrt{31})\}$
- $\{\frac{1}{3}(1 \pm i\sqrt{31})\}$
- $\{\frac{1}{4}(1 \pm i\sqrt{31})\}$

D

Question No. 25

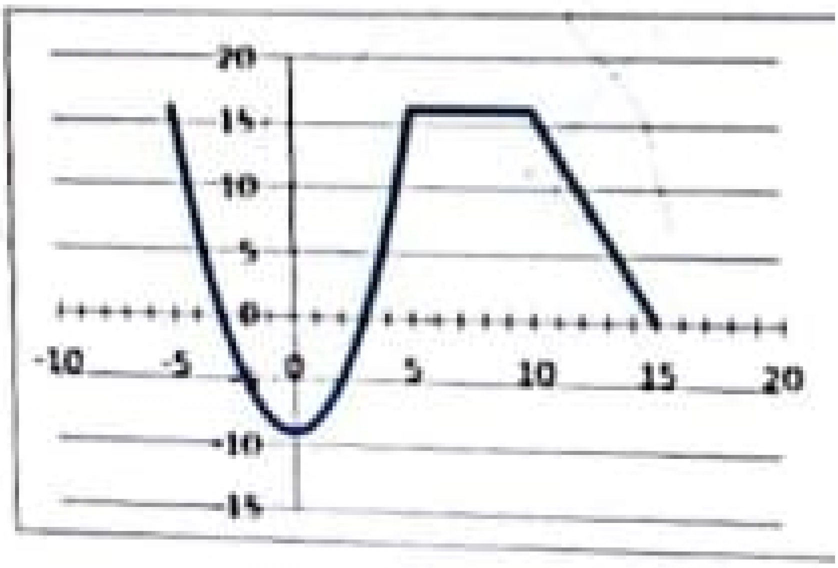
The inverse of $f(x) = (5x-1)^3$ is

- $f^{-1}(x) = \frac{1}{5}(\sqrt[3]{x} - 1)$
- $f^{-1}(x) = \frac{1}{5}(\sqrt[3]{x} + 1)$
- $f^{-1}(x) = \frac{1}{5}(\sqrt[3]{2x} + 1)$
- $f^{-1}(x) = 5(\sqrt[3]{2x} - 1)$

B

Question No. 12

The function in the given figure is



- constant on the interval $[0,10]$
- increasing on the interval $[0,5]$
- increasing on the interval $[-9,16]$
- decreasing on $[-5,15]$

B

Question No. 11

The domain of $f(x) = x - 1$ is

- $(-\infty, 0)$
- $(-\infty, -1)$
- $(1, \infty)$
- $(-\infty, \infty)$

D

Question No. 10

The Solution set of $-2|x-7| \leq -28$ is

- $-7 \leq x \leq 21$
- $\emptyset$
- $(-\infty, \infty)$
- $(-\infty, -7] \cup [21, \infty)$

D

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Question No. 16

If $f(x) = \sqrt{x+2}$ and $g(x) = 3x - 5$. Find $h(x) = (g \circ f)(x)$

- $h(x) = 3\sqrt{x} + 3$
- $h(x) = \sqrt{3x-3}$
- $h(x) = 3\sqrt{x+2} - 5$
- $h(x) = 3\sqrt{x-1}$

C

Question No. 7

The solution set of $-27x = x^3 - 12x^2$ is

- {-3,-9}
- {3,9}
- {0,3,-9}
- {0,3,9}

D

...stion No. 9

Determine the solution set of the following inequality

$$3 + x < \frac{1 - 3x}{2} \le x + 8$$

- [-3,-1)
- (-1,3]
- [-1,3)
- (-3,-1]

A

Question No. 10

The range of $f(x) = -x^2$ is

- $(-\infty, -1]$
- $(0, \infty)$
- $(-\infty, 0]$
- $[-1, \infty)$

C

Question No. 7

Solve $-5(-2x-5+6(x+1))=3x+7$

- $-\frac{12}{23}$
- $-\frac{62}{23}$
- -31
- -6

A

Question No. 8

Solving the equation 2AP-3rt=5Prt for P gives

- $P = \frac{2A-3P}{rt}$
- $P = \frac{2A-5Prt}{3rt}$
- $P = \frac{2A}{rt}$
- $P = \frac{3rt}{2A-5rt}$

D

INSTRUCTION: تعليمات Please choose the BEST answer from the gi

Question:

Solve the inequality $|12 + 3x| > -21$

Options:

- $(-\infty, -11) \cup (3, \infty)$
- $(3, \infty)$
- $(-\infty, \infty)$
- $(-11, 3)$

C

Question No. 8

Multiplying $\frac{2}{3}$ by the number satisfies the equation

$\frac{1}{20}(2x+5)=\frac{x+2}{5}$ gives

- 0
- $-\frac{3}{2}$
- 1
- -1

D

Question No. 24

Given that $f(x) = 3^{2x+1} - 1$. Then $f(-1) =$

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

C

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Question No. 33

$$\cos^2(5\alpha) + \sin^2(5\alpha) =$$

- 1
- -5
- -1
- 5

A

Question No. 14

Evaluate $\lim_{x \to -\infty} (x^3 - x^2 + x - 11) =$

- $-\infty$
- 0
- 11
- ∞

A

Question No. 11

Evaluate $\lim_{x \to 5} \left(x^3 + x - 6\right) =$

- 124
- 135
- 130
- 125

A

Question No. 1

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

- {-3,3}
- $\emptyset$
- {3}
- {-3}

C

Save & Next

Question No. 3

The solution set of the equation $e^{2x} = 1$ is

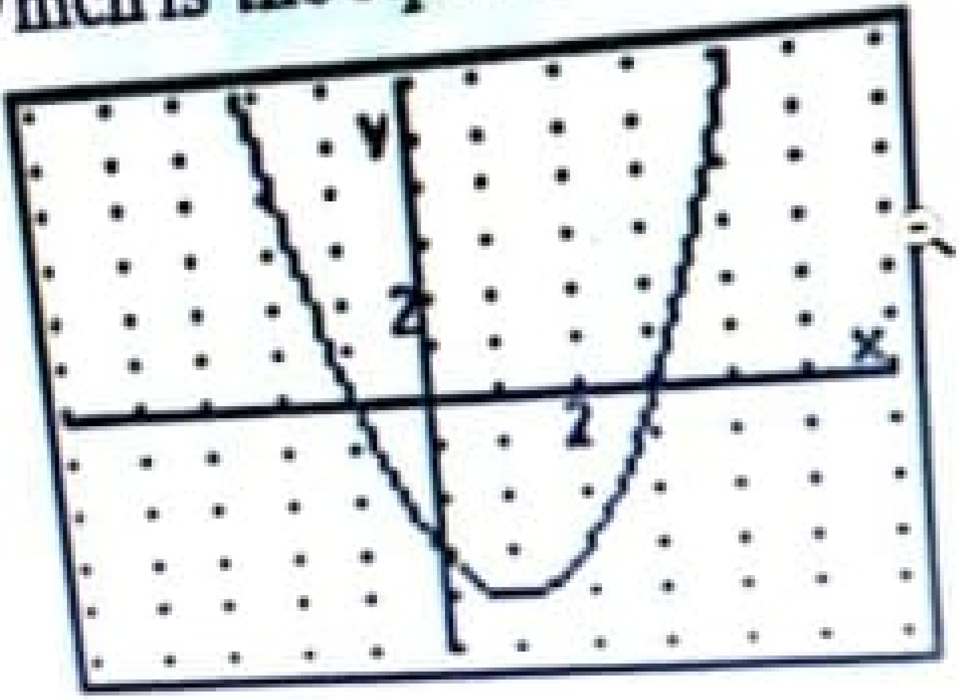
- $\emptyset$
- $\{1\}$
- $\{0\}$
- $\left\{\frac{1}{2}\right\}$

C

Save & Next

Question No. 17

Which is the equation for this graph?



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

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

$y = -x^2 - 2x - 4$

$y = -x^2 - 4$

A

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Question No. 19

Solve: $ax^2 + bx + c = 0$

- $S = \left\{ \frac{b - \sqrt{b^2 - 4ac}}{2a}, \frac{b + \sqrt{b^2 - 4ac}}{2a} \right\}$
- $S = \left\{ \frac{-b - \sqrt{b^2 - 4ac}}{a}, \frac{-b + \sqrt{b^2 - 4ac}}{a} \right\}$
- $S = \left\{ \frac{-b - \sqrt{b^2 + 4ac}}{2a}, \frac{-b + \sqrt{b^2 + 4ac}}{2a} \right\}$
- $S = \left\{ \frac{-b - \sqrt{b^2 - 4ac}}{2a}, \frac{-b + \sqrt{b^2 - 4ac}}{2a} \right\}$

D

Question No. 23

Evaluate $(-i)^{-33}$

- -1
- -i
- i
- 1

C

MATH quiz2

Question No. 3

The domain of $f(x)=\frac{1}{\sqrt{x^2-1}}$ is

- $(-\infty,-1)\cup(-1,\infty)$
- $(-1,1)$
- $(-\infty,1)\cup(1,\infty)$
- $(-\infty,-1)\cup(1,\infty)$

D

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Question No. 12

The range of $f(x) = 4 - x^2$ is

- $(-\infty, 4)$
- $(4, \infty)$
- $(-\infty, 4]$
- $(-\infty, \infty)$

C

[redacted]

Question No. 7

Find $(f \circ g)(x)$, where $f(x) = x^2 - 1,\ g(x) = x^2 + 3$

- $x^4 + 4$
- $x^4 + 6x^2 + 8$
- $x^4 + 8$
- $x^4 + 2x^2 + 4$

B

Question No. 1

The domain of $f(x)=\sqrt[3]{x-7}$ is

- $(-\infty,\infty)$
- $[7,\infty)$
- $(7,\infty)$
- $R\setminus\{7\}$

A

Question No. 2

If a, b and c are real numbers with $c \neq 0$ and $a = b$, then

- $a \div c < b \div c$
- $a \div c = b \div c$
- $a \div c > b \div c$
- $a \div c = -b \div c$

2

B

Question No. 13

The range of the inverse of G = { (-1,0), (0,9), (8,6), (-9,5)} is

- { -1, 1, 8, -9 }
- { -1, 0, 5, -9 }
- { -1, 0, 8, -9 }
- { -1, 0, 8, 9 }

C

Question No. 3

Compute the following sum $\sqrt{2}\,(\sqrt{2}+i\sqrt{2})+\sqrt{3}\,(\sqrt{3}-i\sqrt{3})$

- $5+i$
- $5-i$
- $-5+i$
- $-5-i$

B

Question No. 40

$\cot\theta =$

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

B

Question No. 18

If $e^{2x} = 200$ then $x =$

- $\ln 200$
- $\pm \ln 200$
- $\sqrt{\ln 200}$
- $\ln \sqrt{200}$

D

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Question No. 21

The solution of the exponential equation $2^{x+4} = 8^{x-6}$ is

- $x = 10$
- $x = 11$
- $x = 7$
- $x = 6$

B

L OES

Question No. 32

Give the y-intercept of the line y= 4x-7

- 7
- -4
- -7
- 4

C

Question No. 2

Determine the solution set of the follow

$$4 \le -4 + 2x < 10$$

- s=[4,7)
- s=(4,7]
- s=[4,7]
- s=(4,7)

A

Question No. 6

The solution set of the equation $x^2 = 12$ is

- $\{-2 \pm 3\sqrt{2}\}$
- $\{2 \pm 2\sqrt{2}\}$
- $\{\pm 2\sqrt{3}\}$
- $\{\pm 3\sqrt{2}\}$

C

Save & Next

Question No. 3

Perform the indicated operation.

$$(-4+8i) \div -6i$$

- $-\frac{4}{3}-\frac{2}{3}i$
- $\frac{4}{3}+\frac{2}{3}i$
- $\frac{4}{3}-\frac{2}{3}i$
- $-\frac{4}{3}+\frac{2}{3}i$

D

Question No. 3

Perform the indicated operation.

$$(4-2i)^2$$

- 16-20i
- 16-12i
- 12-16i
- 20-16i

C

Question No. 9

The graph of $f(x) = 2(x+1)^2 - 3$ is

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

Question No. 8

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

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

A

Question No. 1

Solve $(7x+2) - 4 = 8\,(x-9)$

- $x = -7$
- $x = -78$
- $x = -70$
- $x = 70$

D

Question No. 28

Solve the inequality: $|x+3| > 0$

- ϕ
- $(-\infty, \infty)$
- $(-\infty, -3) \cup (-3, \infty)$
- $\{-3\}$

C

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Question No: 24

The graph of $f(x) = -\log_2 x$ is

- Increasing
- Decreasing
- Decreasing and increasing
- Constant

B