

The solution set of the equation  $x^2 = \frac{1}{4}$  is

- $(\frac{1}{4})$
- $(\frac{1}{2})$
- $(-\frac{1}{2})$
- $(-\frac{1}{2}, \frac{1}{2})$

B

Save & Next حفظ و التالي

HP Compaq [E171]

The degree of the quotient of the division  $(2x^3 - 4x^2 + 6x - 5) \div (x - 3)$  equals:

- 3
- 7
- 8
- 6

A

Save & Next ⏪ ⏩

HP Compaq LE1711

Given that  $f(x) = \log_2(x + 2)$ , then  $f(2) =$

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

Save & Next حفظ و التالي

HP Compaq LE1711

- Decreasing and Increasing
- Decreasing
- Increasing
- Constant

C

حفظ و التالي Save & Next

HP Compaq LE1711

Question No. 10

Which of the following statements is always true.

- The graph of a quadratic function is a straight line.
- The graph of a quadratic function passes through the point  $(0, 0)$ .
- The range of a quadratic function is the set of all real numbers.
- The axis of symmetry passes through the vertex.

D

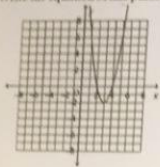
Question No. 3

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

Write the equation of this parabola in vertex form.



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

D

حفظ التالي Save & Next

HP Compaq LE1711

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

$y = -2$

$y = 3$

$x = -2$

$y = 2$

Save & Next حفظ و التالي



B

Save & Next > [B], etc.

HP Compaq (E171)

Question No. 6

If  $f(x) = \frac{3}{x-2}$  and  $g(x) = \frac{4}{x+5}$ . Determine the domain of the product of  $f(x)$  and  $g(x)$ .

- $x \in (-\infty, -5) \cup (2, \infty)$
- $x \in (-\infty, \infty)$
- $x \in (-\infty, -5) \cup (-5, 2) \cup (2, \infty)$
- $x \in (-5, 2)$

**C**

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CL OES

Total questions in exam: 25 | Answered: 0

Question No. 18

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

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



Total questions in exam: 25 | Answered: 8

Question No. 8

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

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

The degree of the quotient of the division  $(2x^3 - 4x^2 + 6x - 5) \div (x - 3)$  equals:

- 3
- 7
- 8
- 6

A

Save & Next ⏩ ⏪

HP Compaq LE1711

Total questions in exam: 25 | Answered: 8

Question No. 16

Let  $f(x) = \frac{1}{x^2 - 3x + 6}$  and  $g(x) = \sqrt{16 - x^2}$ . Find the domain of  $\left(\frac{f}{g}\right)(x)$ .

- $\mathbb{R} \setminus \{2, 3\}$
- $(-4, 4)$
- $(-4, 2) \cup (2, 3) \cup (3, 4)$
- $(-4, 2) \cup (2, 4)$

**C**Save & Next حفظ و التالي

Scientific Calculator

mod

 Deg  Rad

sinh	cosh	tanh	Exp	(	)
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>x</sub>	ln	log
π	e	n!	log <sub>x</sub>	e <sup>x</sup>	10 <sup>x</sup>
sin	cos	tan	x <sup>y</sup>	x <sup>3</sup>	x <sup>2</sup>
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	$\sqrt[x]{y}$	$\sqrt[3]{y}$	x

- ( )
- ( )
- ( )
- ( )

B. not in me

Save & Next حفظ و التالي

HP Compaq LE1711

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

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

حفظ التالي Save & Next

HP Compaq LE1711



- $(-\infty, 2a + \frac{1}{2})$
- $[2a + \frac{1}{2}, \infty)$
- $(-\infty, 2a + \frac{1}{2}]$
- $(-\infty, 2a - \frac{1}{2}]$

# A

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Question No. 23

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

- {0}
- {0,1}
- {1}
- $\phi$

**B**

Save & Next حفظ و التالي

HP Compaq LE1711

Question No. 24

If  $f(x) = -3(x + 1)^2 - 5$ , then the vertex of the graph of  $f$  is

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

D

Save & Next

HP Compaq LE1711

Question No. 8

A function is one-to-one if

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

A

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Total questions in exam: 25 | Answered: 0

Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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

D

Question No. 6

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

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

**B**

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Question No. 21

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

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

C

Save & Next 

HP Compaq LE1711

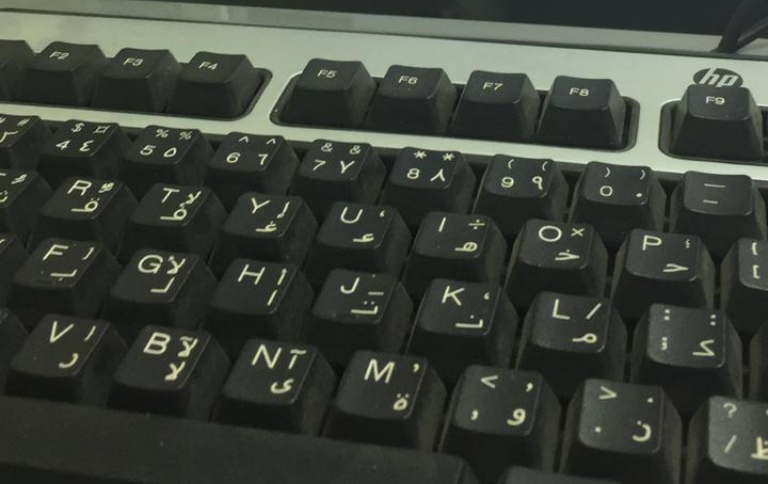


- (1,0)
- (1,0)
- (1,0)
- (1,0)

D

Save & Next

HP Compaq LE1711





Total questions in exam: 20  
Question No. 9

Solve  $-0.2 \leq 0.7 - x \leq 1.8$

- no solution
- $-2.5 \leq x \leq 0.5$
- $-1.1 \leq x \leq 0.9$
- $-0.9 \leq x \leq 1.1$

C

Save & Next 

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Question No. 12

Let  $a \in \mathbb{R} \setminus \{1\}$ . Find the value of  $a$  such that the quotient of dividing  $f(x) = x^3 + (1-a)x^2 + a^2x - 1$  by  $x-a$  is  $x^2 + x + 2$ .

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

C

Save & Next حفظ و التالي

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- ⊙ (١,٥)
- ⊙ (١,٥)
- ⊙ (١,٥)
- ⊙ (١,٥)

Save & Next حفظ و التالي

HP Compaq LE1711



Determine the solution set of the following inequality

$$-4 - x < -x$$

- $s = (-\infty, -4)$
- $s = (-\infty, \infty)$
- $s = (4, \infty)$
- $s = \phi$

**B**

Save & Next حفظ والتالي

## Question No. 13

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

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

Save & Next. حفظ و التالي

## Question No. 16

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(1, 1)$  belongs to both lines  $ax + a^2y = 6$  and  $a^2x + 2y = 11$ .

- $a = 3$
- $a = -1$
- $a = -3$
- $a = 1$

C

Question No. 6

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

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

**B**

Save & Next حفظ و التالي

HP Compaq LE1711

Question No. 15

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**



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

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

Save & Next حفظ واقل

## Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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

D

Total question  
Question No. 10

If 5 is a zero of  $f(x) = x^3 - 8x^2 + 11x + 20$ , then other zeros are

- 4, -1
- 4, 1
- 4, 1
- 4, -1

D

Total questions in exam: 25 | Answered: 0

**B**

Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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



Math\_Quiz2\_Sem1\_2018

Questions in exam: 25 | Answered: 8

No. 25

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

Let  $a \in \mathbb{R}$  and  $f(x) = x^3 - 2x^2 + ax - (a + 2)$ . Use the remainder theorem to evaluate  $f(1 + i)$ .

- $f(1 + i) = -4 + (a - 2)i$
- $f(1 + i) = -4 + (a + 2)i$
- $f(1 + i) = a + 2i$
- $f(1 + i) = (a - 2)i$

A



Total questions in exam: 25 | Answered: 0

Question No. 10

Which of the following statements is always true.

- 2
- The graph of a quadratic function is a straight line.
  - The graph of a quadratic function passes through the point  $(0, 0)$ .
  - The range of a quadratic function is the set of all real numbers.
  - The axis of symmetry passes through the vertex.

D

Question No. 11

The solution set of  $-4|6 - x| + 4 \leq -20$  is

- 2
- $(-\infty, 10] \cup [2, \infty)$
  - $(-\infty, 2] \cup [10, \infty)$
  - $(-\infty, 0] \cup [12, \infty)$
  - $(-\infty, 12] \cup [0, \infty)$

C



Total questions in exam: 25 | Answered: 0

Question No. 14

Find the value of  $a$  such that the remainder of  $\frac{3x^3 + 10x^2 + ax + 3}{x + 1}$  is zero.

- 0
- 10
- 1
- 4

**B**

Total questions in exam: 25 | Answered: 0

## Question No. 15

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 &amp; Next

Total questions in exam: 25 | Answered: 0

Question No. 18

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

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

Save & Next | حفظ التالي

Total questions in exam: 25 | Answered: 0

Question No. 17

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

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

C

Save & Next

Question No. 14

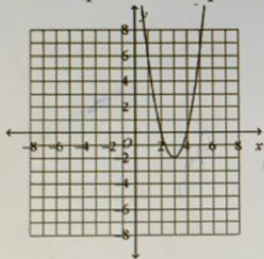
If  $f(x) = \sqrt{x+2}$  and  $g(x) = 3x - 5$ . Find  $h(x) = (g \circ f)(x)$ .

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

**B**

Question No. 22

Write the equation of this parabola in vertex form.



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

D

حفظ والتالي Save & Next

Determine the solution set of the following inequality

$$-4 - x < -x$$

- $s = (-\infty, -4)$
- $s = (-\infty, \infty)$
- $s = (4, \infty)$
- $s = \emptyset$

**B**

Question No. 5

If  $p(x) = \sqrt{x+3}$

and  $q(x) = \sqrt{x-4}$

. Evaluate  $(p \cdot q)(1)$ .

-12

~~$2\sqrt{3}$~~

$2\sqrt{3}$

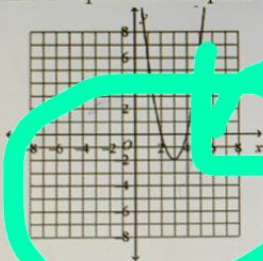
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D



Question No. 22

Write the equation of this parabola in vertex form.



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

Save & Next حفظ والتالي

**Question No. 10**

Which of the following statements is always true.

- The graph of a quadratic function is a straight line.
- The graph of a quadratic function passes through the point  $(0, 0)$ .
- The range of a quadratic function is the set of all real numbers.
- The axis of symmetry passes through the vertex.

Total questions in exam: 25 | Answered: 0

Question No. 1

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

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

**D**

$2x^2 + 5x + 1$

$h(x) = 2x^2 - 5x - 3$

$h(x) = -2x^2 + 5x + 3$

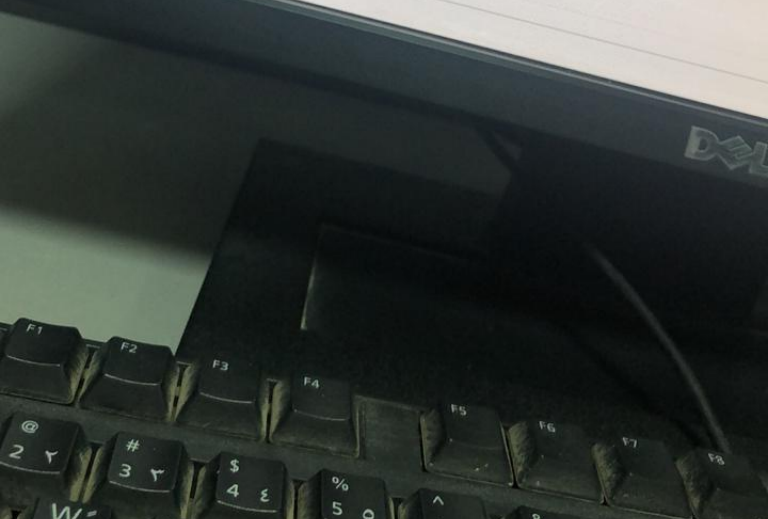
$h(x) = 2x^2 - 5x + 1$

$10x + 6$ . Find  $h(x) = f(x) - g(x)$ .



**B**

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$f(x) = x^3 - 2x^2 + ax - (a + 2)$ . Use the remainder theorem

- $f(1+i) = (a-2)i$
- $f(1+i) = a+2i$
- $f(1+i) = -4 + (a-2)i$
- $f(1+i) = -4 + (a+2)i$



حفظ و تالي Save & Next



Question No. 12

Let  $a > 0$ . The intervals on which the function  $f(x) = a(x-h)^2 + k$  increases and decreases are

- Increasing on  $[h, \infty)$ , decreasing on  $(-\infty, h]$
- Increasing on  $(-\infty, h)$ , decreasing on  $(-\infty, k)$
- Increasing on  $(-\infty, -h)$ , decreasing on  $[k, \infty)$
- Increasing on  $(-\infty, k)$ , decreasing on  $(k, \infty)$

**A**

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ص ۱۱:۱۶، ۲۰۱۸/۱۱/۲۰



MKCL OES  
Online Evaluation System

Total questions in exam: 25 | Answered: 0

Question No. 1

Solve the inequality  $x^2(x-1)(x-2) \leq 0$

- $x \in [1, 2] \cup \{0\}$ .
- $x \in \mathbb{R} \setminus (1, 2)$ .
- $x \in (1, 2) \cup \{0\}$ .
- $x \in \mathbb{R} \setminus [1, 2]$ .

**A**

Save & Next حفظ و التالي



Total questions in exam: 25 | Answered: 0

## Question No. 22

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

- 2
- 3
- 2
- 3

**D**

Save &amp; Next



Question No. 3

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.
- $f(x + a) = 0$ .

Question No. 12

Let  $a > 0$ . The intervals on which the function  $f(x) = a(x-h)^2 + k$  increases and decreases are

- Increasing on  $[h, \infty)$ , decreasing on  $(-\infty, h]$
- Increasing on  $(-\infty, h)$ , decreasing on  $(-\infty, k)$
- Increasing on  $(-\infty, -h)$ , decreasing on  $[k, \infty)$
- Increasing on  $(-\infty, k)$ , decreasing on  $(k, \infty)$

Let  $a \in \mathbb{R}$  and  $f(x) = x^3 - 2x^2 + ax - (a + 2)$ . Use the remainder theorem to evaluate  $f(1 + i)$ .

- $f(1 + i) = -4 + (a - 2)i$
- $f(1 + i) = -4 + (a + 2)i$
- $f(1 + i) = a + 2i$
- $f(1 + i) = (a - 2)i$



Total questions in exam: 25 | Answered: 11

Question No. 25

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

- $f(-1) = 6$
- $f(6) = -1$
- $f(1) = 6$
- $f(6) = 1$

**C**

Save &amp; Next حفظ و التالي

Total questions in exam: 25 | Answered: 11

## Question No. 24

Let  $a > 0$ . The intervals on which the function  $f(x) = a(x-h)^2 + k$  increases and decreases are

- Increasing on  $(-\infty, -h)$ , decreasing on  $[k, \infty)$
- Increasing on  $(-\infty, k)$ , decreasing on  $(k, \infty)$
- Increasing on  $[h, \infty)$ , decreasing on  $(-\infty, h]$
- Increasing on  $(-\infty, h)$ , decreasing on  $(-\infty, k)$

**C**

$2x^2 + 5x + 1$

$10x + 6$ . Find  $h(x) = f(x) - g(x)$ .

$h(x) = 2x^2 - 5x - 3$

$h(x) = -2x^2 + 5x + 3$

$h(x) = 2x^2 - 5x + 1$

Save & Next حفظ واقتلي



$f(x) = x^3 - 2x^2 + ax - (a + 2)$ . Use the remainder theorem

- $f(1+i) = (a-2)i$
- $f(1+i) = a+2i$
- $f(1+i) = -4 + (a-2)i$
- $f(1+i) = -4 + (a+2)i$



حفظ و تالي Save & Next



Question No. 25

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

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

**B**



Total questions in exam: 25 | Answered: 0

Question No. 17

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

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

Save & Next حفظ و التالي

Total questions in exam: 25 | Answered: 0

Question No. 16

Which of the following functions is not one-to-one

- 2
- $F = \{ (3,5), (6,0), (7,-2), (1,-5) \}$
  - $F = \{ (4,-3), (1,0), (5,-2), (1,3) \}$
  - $F = \{ (-3,-2), (0,4), (3,2), (1,-5) \}$
  - $F = \{ (6,-3), (0,5), (4,-2), (1,-3) \}$
- α

B

Save & Next حفظ و التالي

Total questions in exam: 25 | Answered: 0

Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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

Total questions in exam: 25 | Answered: 15

Question No. 13

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

- Increasing
- Constant
- Decreasing
- Decreasing and Increasing

Question No. 6

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

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

Save & Next حفظ و التالي

HP Compaq LE1711

Question No. 1

Solve the inequality  $x^2(x-1)(x-2) \leq 0$

- $x \in [1, 2] \cup \{0\}$ .
- $x \in \mathbb{R} \setminus (1, 2)$ .
- $x \in (1, 2) \cup \{0\}$ .
- $x \in \mathbb{R} \setminus [1, 2]$ .

**A**

Total questions in exam: 25 | Answered: 0

Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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

$f(x) = x^3 - 2x^2 + ax - (a + 2)$ . Use the remainder theorem

- $f(1+i) = (a-2)i$
- $f(1+i) = a+2i$
- $f(1+i) = -4 + (a-2)i$
- $f(1+i) = -4 + (a+2)i$



حفظ و تالي Save & Next





Total questions in exam: 25 | Answered: 0

## Question No. 19

Find the function  $f(x)$  such that  $(fg)(x) = \frac{3}{x^3 - x}$ , where  $g(x) = \frac{3}{x - 1}$ .

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

**A**

Save &amp; Next

Question No. 6

If  $f(x) = \frac{3}{x-2}$  and  $g(x) = \frac{4}{x+5}$ . Determine the domain of the product of  $f(x)$  and  $g(x)$ .

- $x \in (-\infty, -5) \cup (2, \infty)$
- $x \in (-\infty, \infty)$
- $x \in (-\infty, -5) \cup (-5, 2) \cup (2, \infty)$
- $x \in (-5, 2)$

Question No. 3

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.
- $f(x + a) = 0$ .

Total questions in exam: 25 | Answered: 0

## Question No. 21

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

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

Save & Next حفظ و التالي

Find the function  $f(x)$  such that  $(fg)(x) = \frac{3}{x^3 - x}$ , where  $g(x) = \frac{3}{x - 1}$ .

$\frac{1}{x^2 - x}$

$\frac{1}{x^2 + x}$

$\frac{1}{x^2 - 1}$

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

**B**

Question No. 6

If  $f(x) = \frac{3}{x-2}$  and  $g(x) = \frac{4}{x+5}$ . Determine the domain of the product of  $f(x)$  and  $g(x)$ .

- $x \in (-\infty, -5) \cup (2, \infty)$
- $x \in (-\infty, \infty)$
- $x \in (-\infty, -5) \cup (-5, 2) \cup (2, \infty)$
- $x \in (-5, 2)$

The solution set of the equation  $x^2 = 4$  is

- $\left(\frac{1}{4}\right)$
- $\left(\frac{1}{2}\right)$
- $\left(-\frac{1}{2}\right)$
- $\left(-\frac{1}{2}, \frac{1}{2}\right)$

Save & Next

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Total questions in exam: 25 | Answered: 0

## Question No. 22

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

- 2
- 3
- 2
- 3

**D**

Save &amp; Next



Question No. 1

Solve the inequality  $x^2(x-1)(x-2) \leq 0$

- $x \in [1, 2] \cup \{0\}$ .
- $x \in \mathbb{R} \setminus (1, 2)$ .
- $x \in (1, 2) \cup \{0\}$ .
- $x \in \mathbb{R} \setminus [1, 2]$ .

A

Total questions in exam: 25 | Answered: 14

## Question No. 6

Let  $b \in \mathbb{R} \setminus \{-1\}$ . Give the value of  $b$  such that the line  $y = (b + 2)x + 2$  is parallel to the line  $b^2x - y =$

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

Total questions in exam: 25 | Answered: 0

Question No. 20

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

$\left\{ \frac{3}{2}, \frac{5}{2} \right\}$

$\emptyset$

$\left\{ \frac{5}{2} \right\}$

$\left\{ \frac{3}{2} \right\}$

Save &amp; Next

Total questions in exam: 25 | Answered: 0

## Question No. 21

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

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

## Question No. 16

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(1, 1)$  belongs to both lines  $ax + a^2y = 6$  and  $a^2x + 2y = 11$ .

- $a = 3$
- $a = -1$
- $a = -3$
- $a = 1$

Total questions in exam: 25 | Answered: 0

## Question No. 22

If the remainder of the division of  $f(x)$  by  $x + a$  is zero then

- $x$  is a factor of the polynomial  $f(x)$
- $a$  is a factor of the polynomial  $f(x)$
- $x + a$  is a factor of the polynomial  $f(x)$
- $x - a$  is a factor of the polynomial  $f(x)$

Save & Next حفظ و التالي

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

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

Total questions in exam: 25 | Answered: 0

## Question No. 19

Find the function  $f(x)$  such that  $(fg)(x) = \frac{3}{x^3 - x}$ , where  $g(x) = \frac{3}{x - 1}$ .

- $\frac{1}{x^2 + 1}$
- $\frac{1}{x^2 - 1}$
- $\frac{1}{x - 1}$
- $\frac{3}{x}$

Save &amp; Next



$f(x) = \frac{3}{x-2}$  and  $g(x) = \frac{4}{x+5}$ . Determine the domain of the quotient of  $f(x)$  and  $g(x)$ .

$$x \in (-\infty, 2) \cup (2, \infty)$$

$$x \in (-\infty, \infty)$$

$$x \in (-\infty, -5) \cup (-5, \infty)$$

$$x \in (-\infty, -5) \cup (-5, 2) \cup (2, \infty)$$

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

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

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

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

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

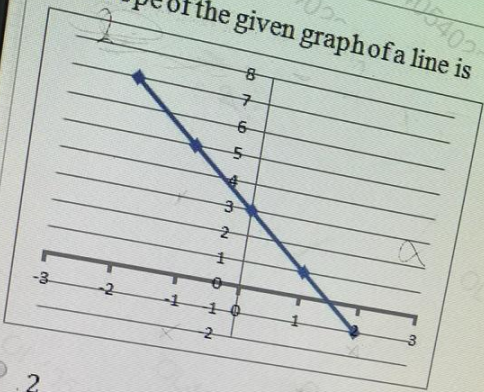
Question No. 4  
The slope of the line  $4x - 3y = 12$  is

- $-\frac{4}{3}$
- 12
- Undefined.
- $\frac{4}{3}$

A

Question No. 13

The slope of the given graph of a line is



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

C

Total questions in exam: 25 | Answered: 14

Question No. 6

Let  $b \in \mathbb{R} \setminus \{-1\}$ . Give the value of  $b$  such that the line  $y = (b + 2)x + 2$  is parallel to the line  $b^2x - y =$

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

Let  $\alpha \in \mathbb{R}$  and  $f(x) = x^3 - 2x^2 + \alpha x - (\alpha + 2)$ . Use the remainder theorem to evaluate  $f(1 + i)$ .

- $f(1 + i) = -4 + (\alpha - 2)i$
- $f(1 + i) = -4 + (\alpha + 2)i$
- $f(1 + i) = \alpha + 2i$
- $f(1 + i) = (\alpha - 2)i$



Question No. 18

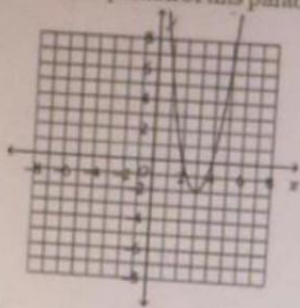
Let  $a \in \mathbb{R}$  and  $x + 2 - a^2$  is a factor of a polynomial function  $f(x)$ , then

- $f(a^2 + 2) = 0$
- $f(a^2 - 2) = 0$
- $f(2 - a^2) = 0$
- $f(-a^2 - 2) = 0$

**A**

Question No. 1

Write the equation of this parabola in vertex form.



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

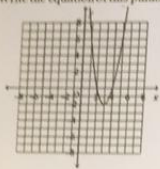


The equation  $x = 3^y - 1$  is equivalent to the equation

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

Save & Next حفظ واقلی

Write the equation of this parabola in vertex form.

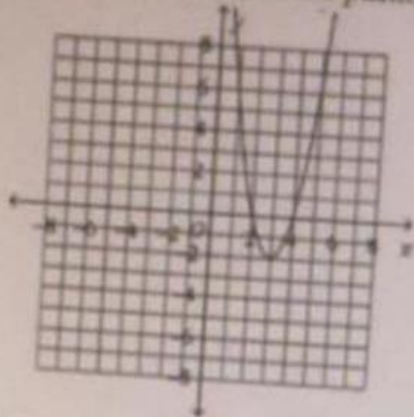


- $y = (x - 3)^2 - 2$
- $y = 2(x - 3)^2 - 2$
- $y = 2(x + 3)^2 - 2$
- $y = 2(x + 3)^2 + 2$

حفظ و التالي Save & Next

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Write the equation of this parabola in vertex form.



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

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

a)

b)

c)

d)

c

Total questions in exam: 25 | Answered: 0

Question No. 21

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

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

Save & Next

Total questions in exam: 25 | Answered: 14

Question No. 6

Let  $b \in \mathbb{R} \setminus \{-1\}$ . Give the value of  $b$  such that the line  $y = (b + 2)x + 2$  is parallel to the line  $b^2x - y =$

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

Question No. 3

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.
- $f(x + a) = 0$ .

C?

حفظ و التالي Save & Next

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Total questions in exam: 25 | Answered: 0

Question No. 1

The quotient of the division  $(x^4 - x^3 - 5x^2 - 3x + 2) \div (x - 1)$  is

- $x^3 - 5x - 8$
- $x^3 + 5x + 8$
- $x^3 - 5x^2 - 8$
- $x^3 + 5x^2 + 8$

A

Question No. 6

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

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

**B**

Total questions in exam: 25 | Answered: 8

Question No. 16

Let  $f(x) = \frac{1}{x^2 - 3x + 4}$  and  $g(x) = \sqrt{16 - x^2}$ . Find the domain of  $\left(\frac{f}{g}\right)(x)$ .

- $\mathbb{R} \setminus \{2, 3\}$
- $(-4, 4)$
- $(-4, 2) \cup (2, 3) \cup (3, 4)$
- $(-4, 2) \cup (2, 4)$

C

Save & Next حفظ و التالي

Scientific Calculator

mod

 Deg  Rad

sinh	cosh	tanh	Exp	(	)
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>x</sub>	ln	log
π	e	n!	log <sub>x</sub>	e <sup>x</sup>	10 <sup>x</sup>
sin	cos	tan	x <sup>y</sup>	x <sup>3</sup>	x <sup>2</sup>
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	$\sqrt[x]{y}$	$\sqrt[3]{y}$	x

$f(x) = x^3 - 2x^2 + ax - (a + 2)$ . Use the remainder theorem

- $f(1+i) = (a-2)i$
- $f(1+i) = a+2i$
- $f(1+i) = -4 + (a-2)i$
- $f(1+i) = -4 + (a+2)i$



حفظ و تالي Save & Next

Total questions in exam: 25 | Answered: 14

Question No. 6

Let  $b \in \mathbb{R} \setminus \{-1\}$ . Give the value of  $b$  such that the line  $y = (b + 2)x + 2$  is parallel to the line  $b^2x - y =$

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

Total questions in exam: 25 | Answered: 0

## Question No. 21

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

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

Save &amp; Next

Total questions in exam: 25 | Answered: 14

Question No. 6

Let  $b \in \mathbb{R} \setminus \{-1\}$ . Give the value of  $b$  such that the line  $y = (b + 2)x + 2$  is parallel to the line  $b^2x - y =$

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

## Question No. 1

If  $a \in \mathbb{R}$ , solve the inequality  $3x - 5a \leq \frac{1}{2}(x + 1)$ , for  $x$ .

- $(-\infty, 2a - \frac{1}{5}]$
- $(-\infty, 2a + \frac{1}{5}]$
- $(-\infty, 2a + \frac{1}{5})$
- $[2a + \frac{1}{5}, \infty)$



Total questions in exam: 25 | Answered: 8

Question No. 16

Let  $f(x) = \frac{1}{x^2 - 16}$  and  $g(x) = \sqrt{16 - x^2}$ . Find the domain of  $\left(\frac{f}{g}\right)(x)$ .

- $\mathbb{R} \setminus \{2, 3\}$
- $(-4, 4)$
- $(-4, 2) \cup (2, 3) \cup (3, 4)$
- $(-4, 2) \cup (2, 4)$

Save &amp; Next

Scientific Calculator

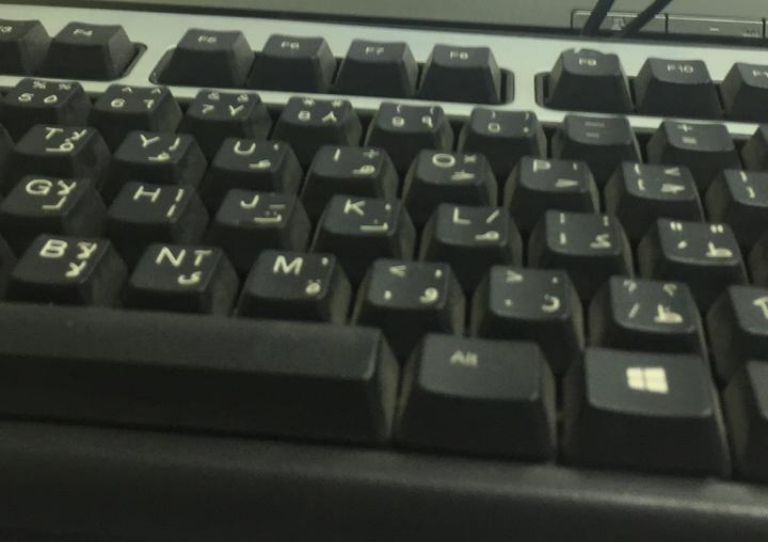
mod  Deg  Rad

sinh	cosh	tanh	Exp	(	)
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>x</sub>	ln	log
π	e	n!	log <sub>x</sub>	e <sup>x</sup>	10 <sup>x</sup>
sin	cos	tan	x <sup>y</sup>	x <sup>3</sup>	x <sup>2</sup>
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	$\sqrt{x}$	$\sqrt[3]{x}$	x

- $(1, m)$
- $(-m, m)$
- $(-m, 2)$
- $(3, m)$

Save & Next حفظ التالي

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

$y = 1$

$y = 3$

$x = 3$

$x = -1$

B

Save & Next حفظ و التالي

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Total questions in exam: 25 | Answered: 0

## Question No. 21

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

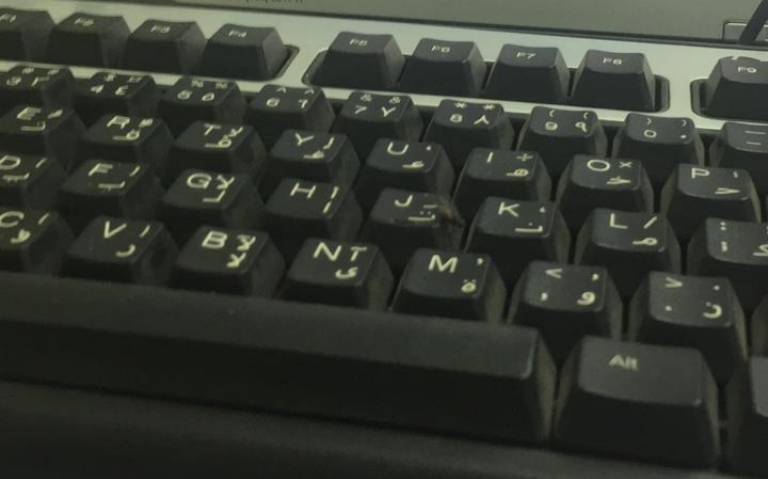
- $y = 3^{x-2}$
- $x = 3^{2-y}$
- $y = 3^{2-x}$
- $x = 3^{y-2}$

Save &amp; Next

- [0]
- [1]
- [2]

Save & Next > [1] kb

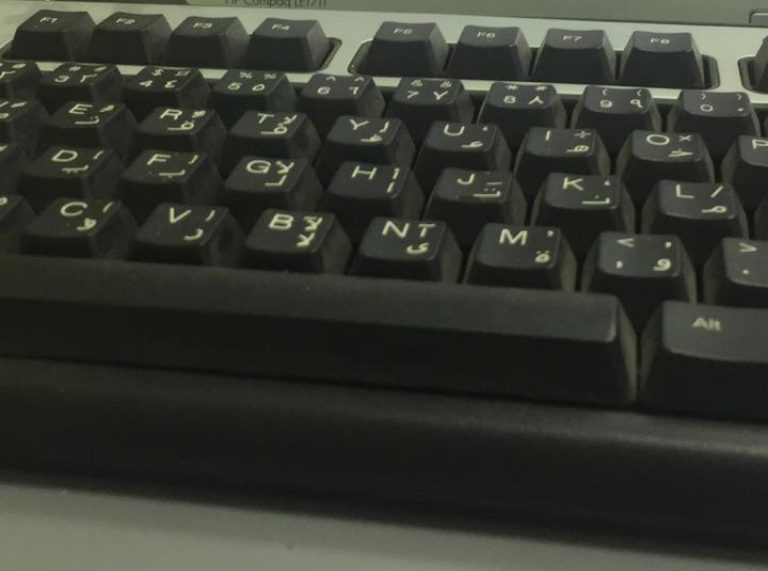
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- (1,1)
- (1,1)

Save & Next حفظ و التالي

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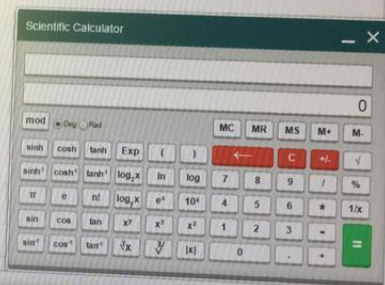


## Question No. 25

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  $bx - y = 3$ .

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

حفظ و التالي Save &amp; Next



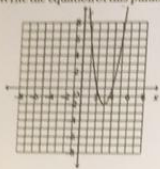
## Question No. 16

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(1, 1)$  belongs to both lines  $ax + a^2y = 6$  and  $a^2x + 2y = 11$ .

- $a = 3$
- $a = -1$
- $a = -3$
- $a = 1$



Write the equation of this parabola in vertex form.



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

حفظ و التالي Save & Next

HP Compaq LE1711

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

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

Save & Next حفظ التالي

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Question No. 12

Let  $a \in \mathbb{R} \setminus \{1\}$ . Find the value of  $a$  such that the quotient of dividing  
 $f(x) = x^3 + (1-a)x^2 + a^2x - 1$  by  $x-a$  is  $x^2 + x + 2$ .

$a = -1$

$a = 2$

$a = -2$

$a = 1$

Save & Next „A7,6m

HP Compaq M1710

Total questions in exam: 25 | Answered: 1

## Question No. 2

If  $f(x) = (x-3)(x+1) + c$  and the remainder of  $\frac{f(x)}{x+2}$  is 6, then  $f(x)$  is equal to

- $x^2 - 2x + 3$
- $x^2 - 2x - 1$
- $x^2 - 2x - 2$
- $2x^2 - 2x + 6$

Save & Next حفظ و التالي

## Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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

Question No. 5

The Solution set of  $|7x - 8| + 8 < 1$  is

- $(-\infty, \frac{1}{7}) \cup (\frac{15}{7}, \infty)$
- $\emptyset$
- $(-\infty, \frac{1}{7})$
- $(\frac{1}{7}, \frac{15}{7})$

A

Let  $\mathcal{R}[2]$  and  $f(x) = 2x^2 + ax - a^2$ . Find the value of  $a$  such that  $x + 2$  is a factor of  $f(x)$ .

- a = -4
- a = -3
- a = -2
- a = 2

Save & Next حفظ و التالي

HP Compaq LE1711

Total questions in exam: 25 | Answered: 1

Question No. 2

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

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

Save & Next حفظ و التالي

HP Compaq [E171]



Question No. 2

Rewrite this absolute value inequality as a compound inequality

$$|11 + 4x| < 23$$

- $-23 < 11 + 4x < 23$
- $-23 > 11 + 4x < 23$
- $-23 < 11 + 4x < -23$
- $-23 > 11 + 4x > 23$

Save & Next حفظ و التالي

## Question No. 13

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

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

Save & Next. حفظ و التالي

Question No. 15

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

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

Total questions in exam: 25 | Answered: 0

Question No. 7

The domain and the range of  $f(x) = 2x$  is

- all real numbers
- all negative real numbers
- all positive real numbers
- all non-zero real numbers

A

- $b = 6$
- $b = 10$
- $b = -6$
- $b = 12$

D

حفظ و التالي Save & Next

HP Compaq (E71)

Question No. 6

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

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

Question No. 3

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.
- $f(x + a) = 0$ .

Questions in exam: 25 | Answered: 0

Question No. 22

Remainder of the division of  $f(x)$  by  $x + a$  is zero then

$x + a$  is a factor of the polynomial  $f(x)$

$x - a$  is a factor of the polynomial  $f(x)$

$a$  is a factor of the polynomial  $f(x)$

$-a$  is a factor of the polynomial  $f(x)$

حفظ وراقلي & Next



Total questions in exam: 25 | Answered: 0

Question No. 19

Find the function  $f(x)$  such that  $(fg)(x) = \frac{3}{x^3 - x}$ , where  $g(x) = \frac{3}{x - 1}$ .

- $\frac{1}{x^2 + x}$
- $\frac{1}{x^2 - 1}$
- $\frac{1}{x^2 - x}$
- $\frac{3}{x - 1}$

Save & Next

If  $f(x) = \frac{1}{x-2}$  and  $g(x) = \frac{1}{x+5}$ , Determine the domain of the function  $f \cdot g$ .

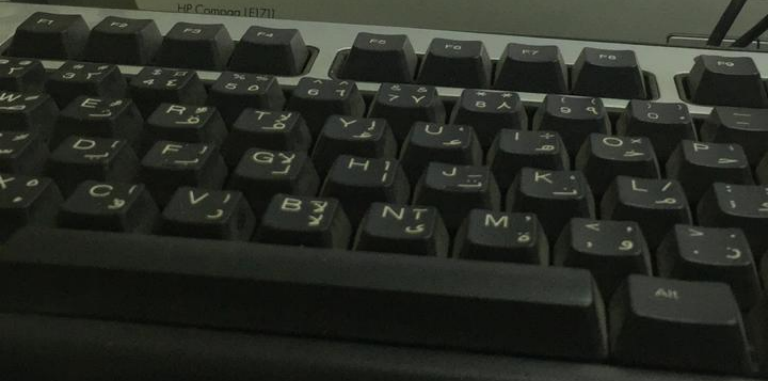
- $x \in (-\infty, \infty)$
- $x \in (-5, 2)$
- $x \in (-\infty, -5) \cup (-5, 2) \cup (2, \infty)$
- $x \in (-\infty, -5) \cup (2, \infty)$

Save & Next حفظ والتالي

- $b = 6$
- $b = 10$
- $b = -6$
- $b = 12$

Save & Next حفظ و التالي

HP Compaq (E71)



If  $f(x) = \frac{1}{x-2}$  and  $g(x) = \frac{1}{x+5}$ , Determine the domain of the function  $f \cdot g$ .

- $x \in (-\infty, \infty)$
- $x \in (-5, 2)$
- $x \in (-\infty, -5) \cup (-5, 2) \cup (2, \infty)$
- $x \in (-\infty, -5) \cup (2, \infty)$

Save & Next حفظ والتالي

- no solution
- $-2.5 \leq x \leq 0.5$
- $-1.1 \leq x \leq 0.9$
- $-0.9 \leq x \leq 1.1$

Save & Next

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

A

حفظ و التالي Save & Next

HP Compaq LE1711

The equation  $y = 7^x$  can be written as

- $y = \log_7 x$
- $y = \log_7 x$
- $x = \log_7 y$
- $x = \log_7 y$

Save & Next حفظ و التالي

HP Compaq LE1711

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

Save & Next

HP Compaq (E171)



Total questions in exam: 25 | Answered: 0

Question No. 19

Find the function  $f(x)$  such that  $(fg)(x) = \frac{3}{x^3 - x}$ , where  $g(x) = \frac{3}{x - 1}$ .

- $\frac{1}{x^2 + x}$
- $\frac{1}{x^2 - 1}$
- $\frac{1}{x^2 - x}$
- $\frac{3}{x - 1}$

Save & Next

Question No. 11

The domain of the function  $f(x) = -3^x$  is

- $(-\infty, \infty)$
- $(-\infty, 3)$
- $(0, \infty)$
- $(3, \infty)$

A

Save & Next حفظ و التالي

Question No. 18

The solution set of the following equation:  $|x-2| = 2x-7$  is

$\{-4, 3\}$

$\{5\}$

$\{3\}$

$\phi$

**B**

Save &amp; Next حفظ و التالي

Question No. 22

Find the equation of the quadratic function that has a vertex at  $(-4, -4)$  and has the point  $(-3, 5)$  on its graph.

- $f(x) = x^2 + 8x - 4$
- $f(x) = -x^2 - 8x - 20$
- $f(x) = -x^2 + 4x - 4$
- $f(x) = -3x^2 + 8x + 20$

Save & Next حل و التالي

Total questions in exam: 25 | Answered: 0

Question No. 17

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

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

Save & Next حفظ و التالي

Question No. 12

Let  $a \in \mathbb{R} \setminus \{1\}$ . Find the value of  $a$  such that the quotient of dividing  
 $f(x) = x^3 + (1-a)x^2 + a^2x - 1$  by  $x - a$  is  $x^2 + 2$ .

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

Save & Next

HP Compaq (E171)

Total questions in exam: 25 | Answered: 1

## Question No. 2

If  $f(x) = (x-3)(x+1) + c$  and the remainder of  $\frac{f(x)}{x+2}$  is 6, then  $f(x)$  is equal to

- $x^2 - 2x + 3$
- $x^2 - 2x - 1$
- $x^2 - 2x - 2$
- $2x^2 - 2x + 6$

Save & Next. حفظ و التالي

Total questions in exam: 25 | Answered: 0

Question No. 20

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

- $\left\{ \frac{3}{2}, \frac{5}{2} \right\}$
- $\emptyset$
- $\left\{ \frac{5}{2} \right\}$
- $\left\{ \frac{3}{2} \right\}$

Save &amp; Next

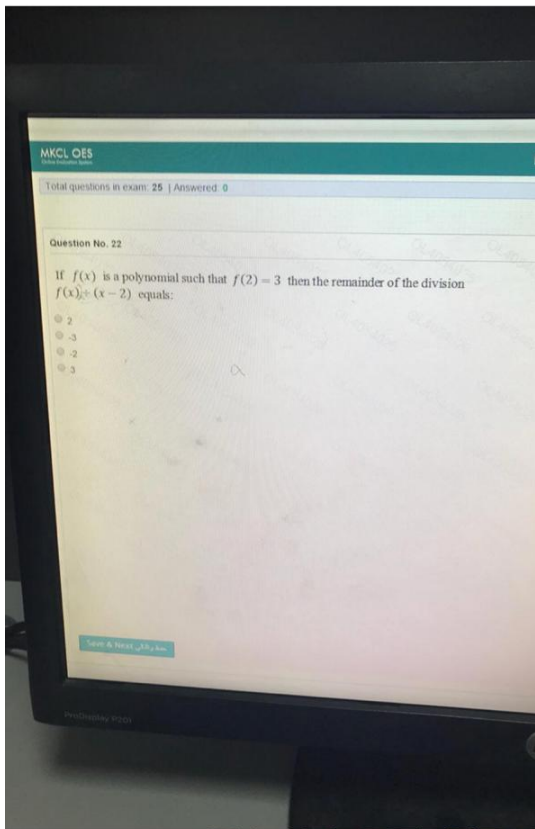


Question No. 5

If  $p(x) = \sqrt{x+3}$

and  $q(x) = \sqrt{x-4}$

. Evaluate  $(p \cdot q)(1)$ . -12  $-2\sqrt{3}$   $2\sqrt{3}$  undefined





## Question No. 25

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

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

Save &amp; Next



Question No. 25

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

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

Total questions in exam: 25 | Answered: 0

## Question No. 15

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 &amp; Next

Question No. 8

The Solution set of  $2 - |1 + \frac{x}{2}| \geq 5$  is

- $[-4, 8]$
- $(-\infty, -8] \cup [4, \infty)$
- $\emptyset$
- $(-\infty, \infty)$

C

Total questions in exam: 25 | Answered: 0

## Question No. 21

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

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

Save & Next حفظ و التالي

## Question No. 13

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

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

Save & Next حفظ و التالي



Question No. 13

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

- $x = 1 + \log_3 y$
- $x = 2 \log_3 y$
- $x = \log_3(y + 1)$
- $y = 1 + \log_3 x$

Save & Next 

Total questions in exam: 25 | Answered: 4

Question No. 11

If 5 is a zero of  $f(x) = x^3 - 8x^2 + 11x + 20$ , then other zeros are

- 4, 1
- 4, 1
- 4, -1
- 4, -1

Save & Next حفظ و التالي

Scientific Calculator

mod  Deg  Rad

sinh	cosh	tanh	Exp
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>x</sub>
π	e	n!	log <sub>x</sub>
sin	cos	tan	x <sup>y</sup>
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	√x

Question No. 3

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.
- $f(x + a) = 0$ .

Total questions in exam: 25 | Answered: 0

## Question No. 22

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

- 2
- 3
- 2
- 3

Save &amp; Next

## Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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

Total questions in exam: 25 | Answered: 0

## Question No. 15

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 &amp; Next

Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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

**Question No. 10**

Which of the following statements is always true.

- 2
- The graph of a quadratic function is a straight line.
  - The graph of a quadratic function passes through the point  $(0, 0)$ .
  - The range of a quadratic function is the set of all real numbers.
  - The axis of symmetry passes through the vertex.



Total questions in exam: 25 | Answered: 0

Question No. 18

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

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

Save & Next

Total questions in exam: 25 | Answered: 0

Question No. 24

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

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

Save &amp; Next

Total questions in exam: 25 | Answered: 0

Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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

Question No. 3

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.
- $f(x + a) = 0$ .

Total questions in exam: 25 | Answered: 0

## Question No. 15

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 &amp; Next

## Question No. 1

If  $a \in \mathbb{R}$ , solve the inequality  $3x - 5a \leq \frac{1}{2}(x + 1)$ , for  $x$ .

- $(-\infty, 2a - \frac{1}{5}]$
- $(-\infty, 2a + \frac{1}{5}]$
- $(-\infty, 2a + \frac{1}{5})$
- $[2a + \frac{1}{5}, \infty)$

Total questions in exam: 25 | Answered: 4

## Question No. 13

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

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

Save & Next حفظ والتالي

## Scientific Calculator

mod

Deg Rad

sinh	cosh	tanh	Exp
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>2</sub> x
π	e	n!	log <sub>y</sub> x
sin	cos	tan	x <sup>y</sup>
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	$\sqrt[x]{y}$

Total questions in exam: 25 | Answered: 8

Question No. 16

Let  $f(x) = \frac{1}{x^2 - 3x + 6}$  and  $g(x) = \sqrt{16 - x^2}$ . Find the domain of  $\left(\frac{f}{g}\right)(x)$ .

- $\mathbb{R} \setminus \{2, 3\}$
- $(-4, 4)$
- $(-4, 2) \cup (2, 3) \cup (3, 4)$
- $(-4, 2) \cup (2, 4)$

Save & Next حفظ و التالي

Scientific Calculator

mod

 Deg  Rad

sinh	cosh	tanh	Exp	(	)
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>x</sub>	ln	log
π	e	n!	log <sub>x</sub>	e <sup>x</sup>	10 <sup>x</sup>
sin	cos	tan	x <sup>y</sup>	x <sup>3</sup>	x <sup>2</sup>
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	$\sqrt[x]{y}$	$\sqrt[3]{x}$	x





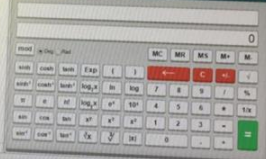
## Question No. 25

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

- a.  $b = -3$
- b.  $b = 3$
- c.  $b = 2$
- d.  $b = 1$

Save &amp; Next

## Scientific Calculator



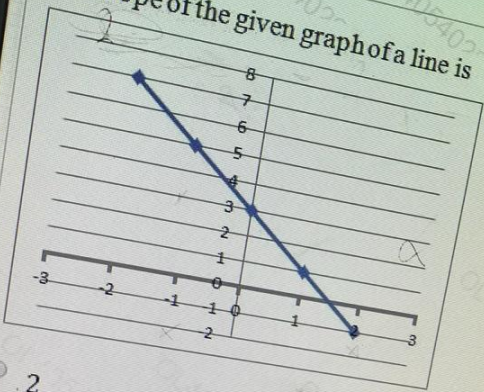
Question No. 10

Which of the following statements is always true.

- 1
- The graph of a quadratic function is a straight line.
  - The graph of a quadratic function passes through the point  $(0, 0)$ .
  - The range of a quadratic function is the set of all real numbers.
  - The axis of symmetry passes through the vertex.

Question No. 13

The slope of the given graph of a line is



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

Question No. 11

The solution set of  $-4|6 - x| + 4 \leq -20$  is

- 2
- $(-\infty, 10] \cup [2, \infty)$
  - $(-\infty, 2] \cup [10, \infty)$
  - $(-\infty, 0] \cup [12, \infty)$
  - $(-\infty, 12] \cup [0, \infty)$

Question No. 12

The function  $f(x) = 3x + x^2 - 6$  is

- Linear
- Cubic
- Quartic
- Quadratic

D

**Question No. 10**

Which of the following statements is always true.

- 2
- The graph of a quadratic function is a straight line.
  - The graph of a quadratic function passes through the point  $(0, 0)$ .
  - The range of a quadratic function is the set of all real numbers.
  - The axis of symmetry passes through the vertex.

Online Evaluation System  
Total questions in exam: 25 | Answered: 0

Question No. 14

Find the value of  $a$  such that the remainder of  $\frac{3x^3 + 10x^2 + ax + 3}{x + 1}$  is zero.

- 0
- 10
- 1
- 4

Total questions in exam: 25 | Answered: 0

## Question No. 15

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 &amp; Next



Total questions in exam: 25 | Answered: 0

Question No. 1

The quotient of the division  $(x^4 - x^3 - 5x^2 - 3x + 2) \div (x - 1)$  is

- $x^3 - 5x - 8$
- $x^3 + 5x + 8$
- $x^3 - 5x^2 - 8$
- $x^3 + 5x^2 + 8$

Total questions in exam: 25 | Answered: 0

Question No. 14

Find the value of  $a$  such that the remainder of  $\frac{3x^3 + 10x^2 + ax + 3}{x + 1}$  is zero.

- 0
- 10
- 1
- 4

Total questions in exam: 25 | Answered: 0

## Question No. 18

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

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

Save &amp; Next

Total questions in exam: 25 | Answered: 0

## Question No. 19

Find the function  $f(x)$  such that  $(fg)(x) = \frac{3}{x^3 - x}$ , where  $g(x) = \frac{3}{x - 1}$ .

- $\frac{1}{x^2 + x}$
- $\frac{1}{x^2 - 1}$
- $\frac{1}{x^2 - x}$
- $\frac{3}{x - 1}$

Save &amp; Next

Total questions in exam: 25 | Answered: 0

Question No. 16

Which of the following functions is not one-to-one

2

- $F = \{ (3,5), (6,0), (7,-2), (1,-5) \}$
- $F = \{ (4,-3), (1,0), (5,-2), (1,3) \}$
- $F = \{ (-3,-2), (0,4), (3,2), (1,-5) \}$
- $F = \{ (6,-3), (0,5), (4,-2), (1,-3) \}$

Save & Next

Total questions in exam: 25 | Answered: 0

Question No. 17

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

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

Save & Next حفظ و التالي

Total questions in exam: 25 | Answered: 0

## Question No. 17

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

- 2
- $y = -3$
  - $x = 3$
  - $x = 5$
  - $y = 3$
- $\alpha$
- x

Save &amp; Next

Total questions in exam: 25 | Answered: 0

## Question No. 20

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

- $\left\{ \frac{3}{2}, \frac{5}{2} \right\}$
- $\emptyset$
- $\left\{ \frac{5}{2} \right\}$
- $\left\{ \frac{3}{2} \right\}$

Save &amp; Next



Total questions in exam: 25 | Answered: 0

## Question No. 21

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

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

Save & Next حفظ و التالي

Total questions in exam: 25 | Answered: 0

## Question No. 22

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

- 2
- 3
- 2
- 3

Save &amp; Next

Total questions in exam: 25 | Answered: 0

Question No. 1

The quotient of the division  $(x^4 - x^3 - 5x^2 - 3x + 2) \div (x - 1)$  is

- $x^3 - 5x - 8$
- $x^3 + 5x + 8$
- $x^3 - 5x^2 - 8$
- $x^3 + 5x^2 + 8$

Total questions in exam: 25 | Answered: 0

Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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

Question No. 6

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

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

Question No. 5

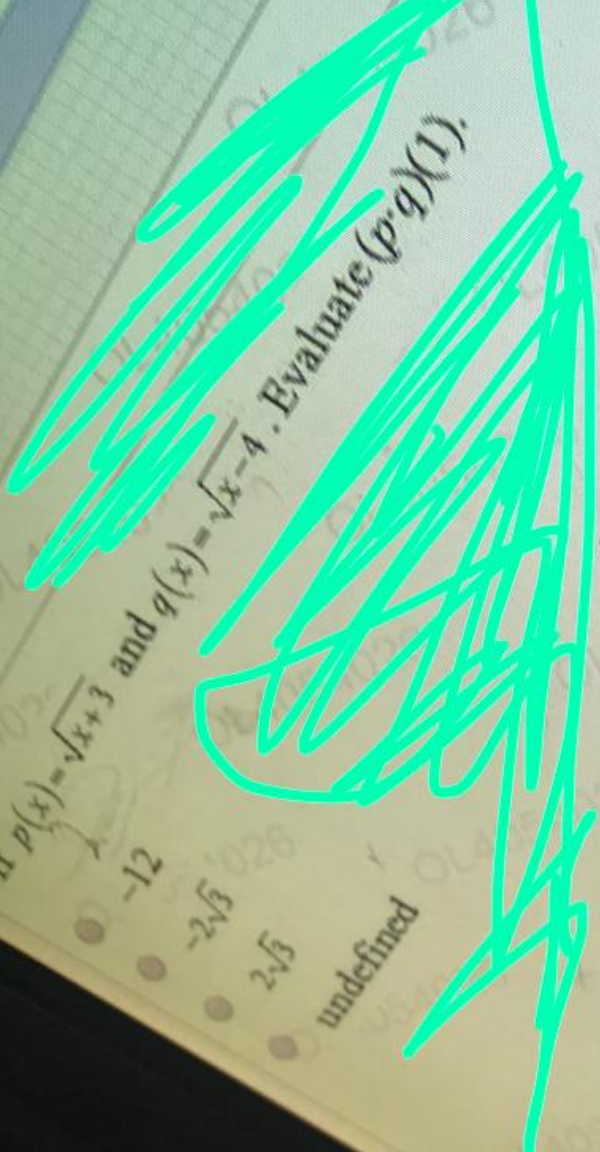
If  $p(x) = \sqrt{x+3}$  and  $q(x) = \sqrt{x-4}$ . Evaluate  $(p \cdot q)(1)$ .

-12

$-2\sqrt{3}$

$2\sqrt{3}$

undefined



Total questions in exam: 25 | Answered: 0

Question No. 1

The quotient of the division  $(x^4 - x^3 - 5x^2 - 3x + 2) \div (x - 1)$  is

- $x^3 - 5x - 8$
- $x^3 + 5x + 8$
- $x^3 - 5x^2 - 8$
- $x^3 + 5x^2 + 8$

Total questions in exam: 25 | Answered: 0

## Question No. 14

Find the value of  $a$  such that the remainder of  $\frac{3x^3 + 10x^2 + ax + 3}{x + 1}$  is zero.

- 0
- 10
- 1
- 4



Total questions in exam: 25 | Answered: 0

## Question No. 18

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

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

Save &amp; Next

Total questions in exam: 25 | Answered: 0

Question No. 19

Find the function  $f(x)$  such that  $(fg)(x) = \frac{3}{x^3 - x}$ , where  $g(x) = \frac{3}{x - 1}$ .

- $\frac{1}{x^2 + x}$
- $\frac{1}{x^2 - 1}$
- $\frac{1}{x^2 - x}$
- $\frac{3}{x - 1}$

Save & Next

Total questions in exam: 25 | Answered: 0

Question No. 16

Which of the following functions is not one-to-one

2

- $F = \{ (3,5), (6,0), (7,-2), (1,-5) \}$
- $F = \{ (4,-3), (1,0), (5,-2), (1,3) \}$
- $F = \{ (-3,-2), (0,4), (3,2), (1,-5) \}$
- $F = \{ (6,-3), (0,5), (4,-2), (1,-3) \}$

Save & Next

Total questions in exam: 25 | Answered: 0

Question No. 17

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

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

Submit & Review

Question No. 15

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

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

Total questions in exam: 25 | Answered: 0

**Question No. 10**

Which of the following statements is always true.

- The graph of a quadratic function is a straight line.
- The graph of a quadratic function passes through the point  $(0, 0)$ .
- The range of a quadratic function is the set of all real numbers.
- The axis of symmetry passes through the vertex.

## Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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

Question No. 3

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.
- $f(x + a) = 0$ .



## Question No. 14

Find the value of  $a$  such that the remainder of  $\frac{3x^2 + 10x^2 + ax + 3}{x + 1}$  is zero.

- 0
- 10
- 1
- 4

Question No. 1

Find the function  $f(x)$  such that  $(fg)(x) = \frac{3}{2x-4}$ , where  $g(x) = \frac{3}{x-1}$

$\frac{1}{x-1}$

$\frac{1}{x}$

$\frac{1}{2x}$

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

Save & Next مؤقتاً

HP Compaq LE1711

## Question No. 13

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

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

Save & Next حفظ و التالي

Total questions in exam: 25 | Answered: 7

## Question No. 1

Find the function  $f(x)$  such that  $(fg)(x) = \frac{3}{x^3 - x}$ , where  $g(x) = \frac{3}{x-1}$ .

- $\frac{1}{x^2-1}$
- $\frac{3}{x-1}$
- $\frac{1}{x^2+x}$
- $\frac{1}{x^2-x}$

Save &amp; Next

- (1,3)
- (-2,3)
- $(-\infty, 1) \cup (3, \infty)$
- $(-\infty, 3)$

Save & Next حفظ والتالي

Question No. 3

The slope of the line  $x = -3$  is

- 1
- 0
- Undefined
- 1

Which of the following statements is always true?

The graph of a quadratic function passes through the point  $(0, 0)$ .

The axis of symmetry passes through the vertex.

The graph of a quadratic function is a straight line.

The range of a quadratic function is the set of all real numbers.



Total questions in exam: 25 | Answered: 25

## Question No. 5

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

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

Save & Next حفظ و التالي



Question No. 8

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

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

Save & Next /10

Question No. 6

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

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

Total questions in exam: 25 | Answered: 25

## Question No. 7

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

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

Question No. 8

The remainder of the division  $(x^4 + x^3 + x^2 + x + 1) \div (x - 1)$  is

- 4
- 5
- 2
- 3

Total questions in exam: 25 | Answered: 25

## Question No. 9

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

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

Save &amp; Next حفظ و التالي

Total questions in exam: 25 | Answered: 0

## Question No. 18

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

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

Save &amp; Next

## Question No. 1

The horizontal asymptote to the graph of  $f(x) = 4^x + 2$

$y = 4$

$x = 4$

$y = 2$

$x = 2$

Total questions in exam: 25 | Answered: 0

Question No. 19

Find the function  $f(x)$  such that  $(fg)(x) = \frac{3}{x^3 - x}$ , where  $g(x) = \frac{3}{x - 1}$ .

- $\frac{1}{x^2 + x}$
- $\frac{1}{x^2 - 1}$
- $\frac{1}{x^2 - x}$
- $\frac{3}{x - 1}$

Save & Next



Total questions in exam: 25 | Answered: 0

## Question No. 15

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 حفظ والتالي

Total questions in exam: 25 | Answered: 0

## Question No. 15

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 &amp; Next

Total questions in exam: 25 | Answered: 0

## Question No. 21

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

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

Save &amp; Next



## Question No. 25

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

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

Save &amp; Next





## Question No. 25

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

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

Save &amp; Next



Compaq LE1711

Total questions in exam: 25 | Answered: 4

## Question No. 13

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

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

Save &amp; Next حفظ والتالي

## Scientific Calculator

mod

Deg Rad

sinh	cosh	tanh	Exp
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>2</sub> x
π	e	n!	log <sub>y</sub> x
sin	cos	tan	x <sup>y</sup>
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	$\sqrt[x]{y}$

Total questions in exam: 25 | Answered: 0

## Question No. 17

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

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

Save &amp; Next

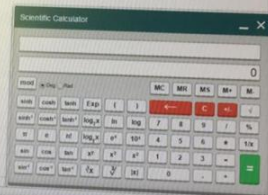


## Question No. 25

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

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

Save &amp; Next



Compaq LE1711



Total questions in exam: 25 | Answered: 0

Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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

Total questions in exam: 25 | Answered: 0

## Question No. 2

The quotient of the division  $(5x^3 - 6x^2 - 28x - 2) \div (x + 2)$  is

- $5x^2 - 16x - 4$
- $5x^2 - 16x + 4$
- $5x^2 + 16x$
- $5x^2 - 16x$

## Question No. 1

If  $a \in \mathbb{R}$ , solve the inequality  $3x - 5a \leq \frac{1}{2}(x + 1)$ , for  $x$ .

- $(-\infty, 2a - \frac{1}{5}]$
- $(-\infty, 2a + \frac{1}{5}]$
- $(-\infty, 2a + \frac{1}{5})$
- $[2a + \frac{1}{5}, \infty)$



## Question No. 25

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

- a.  $b = -3$
- b.  $b = 3$
- c.  $b = 2$
- d.  $b = 1$

Save &amp; Next



Total questions in exam: 25 | Answered: 4

## Question No. 12

The degree of the quotient of the division  $(x^8 - 4x^3 + x + 9) \div (x - 3)$  equals:

- 8  
 9  
 6  
 7

Save &amp; Next حفظ والتالي

## Scientific Calculator

mod  Deg  Rad

sinh	cosh	tanh	Exp	(	)
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>2</sub> x	ln	log
π	e	n!	log <sub>10</sub> x	e <sup>x</sup>	10 <sup>x</sup>
sin	cos	tan	x <sup>y</sup>	x <sup>2</sup>	x <sup>3</sup>
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	√x	∛x	x

Total questions in exam: 25 | Answered: 4

## Question No. 11

If 5 is a zero of  $f(x) = x^3 - 8x^2 + 11x + 20$ , then other zeros are

- 4, 1
- 4, 1
- 4, -1
- 4, -1

Save &amp; Next حفظ والتالي

## Scientific Calculator

mod				Deg		Rad	
sinh	cosh	tanh	Exp				
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>e</sub> x				
π	e	n!	log <sub>10</sub> x				
sin	cos	tan	x <sup>y</sup>				
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	√ <sup>y</sup> x				

Total questions in exam: 25 | Answered: 4

## Question No. 10

Give the y-intercept of the line  $3y - x = 0$ 

- 3
- 1
- 0
- 3

Save &amp; Next حفظ والتالي

## Scientific Calculator

mod  Deg  Rad

sinh	cosh	tanh	Exp	
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>2</sub> x	ln
π	e	n!	log <sub>y</sub> x	e <sup>x</sup>
sin	cos	tan	x <sup>y</sup>	x <sup>2</sup>
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	$\sqrt[y]{x}$	$\sqrt[3]{x}$

Total questions in exam: 25 | Answered: 4

Question No. 9

Find the value of  $a$  such that the remainder of  $\frac{3x^3 + 10x^2 + ax + 3}{x + 1}$  is zero.

- 1  
 -4  
 10  
 0

Save & Next حفظ و التالي

## Scientific Calculator

mod										Deg		Rad		MC		MR	
sinh	cosh	tanh	Exp	(	)	←											
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>2</sub> x	ln	log	7	8										
π	e	n!	log <sub>10</sub> x	e <sup>x</sup>	10 <sup>x</sup>	4	5										
sin	cos	tan	x <sup>y</sup>	x <sup>3</sup>	x <sup>2</sup>	1	2										
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	√x	∛x	x	0											



Question No. 15

Given that  $f(x) = 4^{2x-1} + 1$ . Then  $f(1) =$ 

- 16
- 14
- 17
- 15

Save &amp; Next حفظ و التالي

Scientific Calculator

mod  Deg  Rad

sinh	cosh	tanh	Exp
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>2</sub> x
π	e	n!	log <sub>10</sub> x
sin	cos	tan	x <sup>y</sup>
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	√x

Question No. 14

The solution of  $14 \leq 3x + 5 \leq 23$  is .....

- (-6, -3)
- [3, 6]
- (3, 6)
- [-6, -3]

Save & Next حفظ و التالي

Scientific Calcul

mod  Deg  Rad

sinh cosh tan

sinh<sup>-1</sup> cosh<sup>-1</sup> tan<sup>-1</sup>

π e

sin cos

sin<sup>-1</sup> cos<sup>-1</sup>

Total questions in exam: 25 | Answered: 4

## Question No. 13

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

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

Save & Next حفظ و التالي

## Scientific Calculator

mod

 Deg  Rad

sinh	coth	tanh	Exp
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>e</sub> x
π	e	n!	log <sub>10</sub> x
sin	cos	tan	x <sup>y</sup>
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	<sup>3</sup> √x

Total questions in exam: 25 | Answered: 8

Question No. 16

Let  $f(x) = \frac{1}{x^2 - 3x + 6}$  and  $g(x) = \sqrt{16 - x^2}$ . Find the domain of  $\left(\frac{f}{g}\right)(x)$ .

- $\mathbb{R} \setminus \{2, 3\}$
- $(-4, 4)$
- $(-4, 2) \cup (2, 3) \cup (3, 4)$
- $(-4, 2) \cup (2, 4)$

Save &amp; Next حفظ والتالي

Scientific Calculator

mod

 Deg  Rad

sinh

cosh

tanh

Exp

(

)

sinh<sup>-1</sup>cosh<sup>-1</sup>tanh<sup>-1</sup>log<sub>x</sub>

ln

log

π

e

n!

log<sub>x</sub>e<sup>x</sup>10<sup>x</sup>

sin

cos

tan

x<sup>y</sup>x<sup>3</sup>x<sup>2</sup>sin<sup>-1</sup>cos<sup>-1</sup>tan<sup>-1</sup>√<sup>x</sup>√<sup>3</sup>

|x|

**Question No. 10**

Which of the following statements is always true.

- 2
- The graph of a quadratic function is a straight line.
  - The graph of a quadratic function passes through the point  $(0, 0)$ .
  - The range of a quadratic function is the set of all real numbers.
  - The axis of symmetry passes through the vertex.

## Question No. 7

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

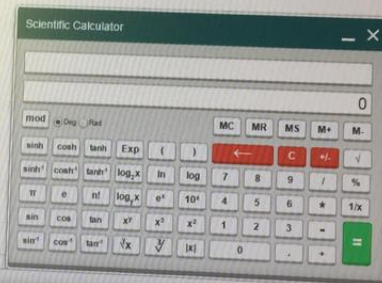
- $f(1) = 0$
- $f(0) = -1$
- $f(0) = 1$
- $f(-1) = 0$

## Question No. 25

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  $bx - y = 3$ .

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

حفظ و التالي Save &amp; Next



Total questions in exam: 25 | Answered: 2

## Question No. 5

Solve  $|x - 4| < 7$ 

- (-11,11)
- (-11,3)
- (-3,11)
- (-3,3)

Save &amp; Next حفظ والتالي



## Question No. 21

The equation  $x = 2 - \log_2 y$  is equivalent to the equation

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

Question No. 18

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

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

Total questions in exam: 25 | Answered: 0

## Question No. 15

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

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

Total questions in exam: 25 | Answered: 4

## Question No. 12

The degree of the quotient of the division  $(x^8 - 4x^3 + x + 9) \div (x - 3)$  equals:

- 8  
 9  
 6  
 7

Save &amp; Next حفظ والتالي

## Scientific Calculator

mod  Deg  Rad

sinh	cosh	tanh	Exp	(	)
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>10</sub> x	ln	log
π	e	n!	log <sub>e</sub> x	e <sup>x</sup>	10 <sup>x</sup>
sin	cos	tan	x <sup>y</sup>	x <sup>2</sup>	x <sup>3</sup>
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	$\sqrt{x}$	$\sqrt[3]{x}$	x

Total questions in exam: 25 | Answered: 0

## Question No. 22

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

- 2
- 3
- 2
- 3

Save &amp; Next

Question No. 19

Find the function  $f(x)$  such that  $(fg)(x) = \frac{3}{x^3 - x}$ , where  $g(x) = \frac{3}{x - 1}$ .

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

Save & Next

**Question No. 10**

Which of the following statements is always true.

- 2
- The graph of a quadratic function is a straight line.
  - The graph of a quadratic function passes through the point  $(0, 0)$ .
  - The range of a quadratic function is the set of all real numbers.
  - The axis of symmetry passes through the vertex.

Total questions in exam: 25 | Answered: 0

Question No. 18

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

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

Save & Next



Total questions in exam: 25 | Answered: 0

Question No. 24

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

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

Save &amp; Next

Total questions in exam: 25 | Answered: 0

Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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

Question No. 3

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.
- $f(x + a) = 0$ .

Total questions in exam: 25 | Answered: 0

## Question No. 15

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 &amp; Next

Total questions in exam: 25 | Answered: 4

## Question No. 13

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

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

Save & Next حفظ والتالي

## Scientific Calculator

mod

Deg Rad

sinh	cosh	tanh	Exp
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>2</sub> x
π	e	n!	log <sub>y</sub> x
sin	cos	tan	x <sup>y</sup>
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	$\sqrt[x]{y}$

Total questions in exam: 25 | Answered: 8

Question No. 16

Let  $f(x) = \frac{1}{x^2 - 3x + 6}$  and  $g(x) = \sqrt{16 - x^2}$ . Find the domain of  $\left(\frac{f}{g}\right)(x)$ .

- $\mathbb{R} \setminus \{2, 3\}$
- $(-4, 4)$
- $(-4, 2) \cup (2, 3) \cup (3, 4)$
- $(-4, 2) \cup (2, 4)$

Save & Next حفظ و التالي

Scientific Calculator

mod

 Deg  Rad

sinh	cosh	tanh	Exp	(	)
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>x</sub>	ln	log
π	e	n!	log <sub>x</sub>	e <sup>x</sup>	10 <sup>x</sup>
sin	cos	tan	x <sup>y</sup>	x <sup>3</sup>	x <sup>2</sup>
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	$\sqrt[x]{y}$	$\sqrt[3]{x}$	x

## Question No. 14

Find the value of  $a$  such that the remainder of  $\frac{3x^2 + 10x^2 + ax + 3}{x + 1}$  is zero.

- 0
- 10
- 1
- 4

Total questions in exam: 25 | Answered: 0

## Question No. 22

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

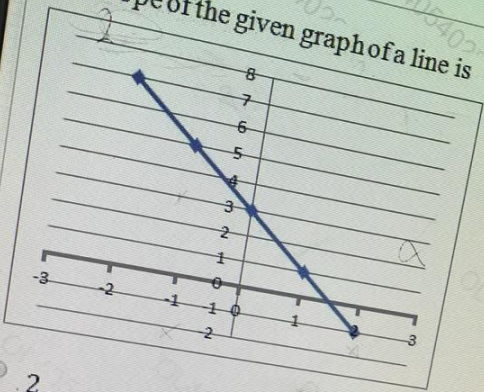
- 2
- 3
- 2
- 3

Save &amp; Next



Question No. 13

The slope of the given graph of a line is



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

Total questions in exam: 25 | Answered: 0

Question No. 7

The domain and the range of  $f(x) = 2x$  is

- all real numbers
- all negative real numbers
- all positive real numbers
- all non-zero real numbers

Question No. 6

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

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

Question No. 3

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.
- $f(x + a) = 0$ .

## Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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

Total questions in exam: 25 | Answered: 0

Question No. 10

Which of the following statements is always true.

- The graph of a quadratic function is a straight line.
- The graph of a quadratic function passes through the point  $(0, 0)$ .
- The range of a quadratic function is the set of all real numbers.
- The axis of symmetry passes through the vertex.

Samba.

تم ايداع مبلغ ١٠٩٠,٠٠ في حساب \*\*\*\*\* ٢١٦١ في  
٢٠-١١-٢٠١٨ ٠٩:٠٠ صباحا

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Online Evaluation System

Total questions in exam: 25 | Answered: 0

Question No. 15

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 & Proceed

Total questions in exam: 25 | Answered: 0

Question No. 7

The domain and the range of  $f(x) = 2x$  is

- all real numbers
- all negative real numbers
- all positive real numbers
- all non-zero real numbers



**Question No. 10**

Which of the following statements is always true.

- 2
- The graph of a quadratic function is a straight line.
  - The graph of a quadratic function passes through the point  $(0, 0)$ .
  - The range of a quadratic function is the set of all real numbers.
  - The axis of symmetry passes through the vertex.

Question No. 10

Which of the following statements is always true.

- 1
- The graph of a quadratic function is a straight line.
  - The graph of a quadratic function passes through the point  $(0, 0)$ .
  - The range of a quadratic function is the set of all real numbers.
  - The axis of symmetry passes through the vertex.

Total questions in exam: 25 | Answered: 0

## Question No. 1

The horizontal asymptote to the graph of  $f(x) = 4^x + 2$ 

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

## Question No. 2

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

$\left\{ \frac{5}{2} \right\}$

$\left\{ \frac{3}{2} \right\}$

$\left\{ \frac{3}{2}, \frac{5}{2} \right\}$

Save & Next حفظ والتالي

Scien

mod

sinh

sinh<sup>-1</sup>

π

sin

sin<sup>-1</sup>

Question No. 3

Let  $a > 0$ . The intervals on which the function  $f(x) = a(x-h)^2 + k$  increases and decreases are

- Increasing on  $(-\infty, -h)$ , decreasing on  $[k, \infty)$
- Increasing on  $(-\infty, k)$ , decreasing on  $(k, \infty)$
- Increasing on  $(-\infty, h)$ , decreasing on  $(-\infty, k)$
- Increasing on  $[h, \infty)$ , decreasing on  $(-\infty, h]$

حفظ و التالي Save & Next

Scientific Calculator

[ ]											
[ ]											
mod	°	Deg	Rad	MC	M						
sinh	cosh	tanh	Exp	(	)	←	7	8			
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>2</sub> x	ln	log	7	8				
π	e	n!	log <sub>10</sub> x	e <sup>x</sup>	10 <sup>x</sup>	4	5				
sin	cos	tan	x <sup>y</sup>	x <sup>2</sup>	x <sup>3</sup>	1	2				
sin <sup>n</sup>	cos <sup>n</sup>	tan <sup>n</sup>	$\sqrt[x]{y}$	$\sqrt[3]{x}$	x	0					

Question No. 1

The horizontal asymptote to the graph of  $f(x) = 4^x + 2$

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

Save & Next حفظ والتالي

Scientific

mod

sinh

sinh<sup>-1</sup>

π

sin

sin<sup>-1</sup>

## Question No. 4

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

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

Save & Next حفظ و التالي

Scientific

mod • D

sinh cos

sinh<sup>2</sup> cos<sup>2</sup> $\pi$  e

sin cos

sin<sup>2</sup> cos<sup>2</sup>

Total questions in exam: 25 | Answered: 2

## Question No. 5

Solve  $|x - 4| < 7$ 

- (-11,11)
- (-11,3)
- (-3,11)
- (-3,3)

Save &amp; Next حفظ والتالي



## Question No. 6

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

- $3a^2 + 8a + 4$
- $3a^2 + 2a - 1$
- $a^4 + 2a^2 - 1$
- $a^2 + 2a - 1$

Save & Next حفظ والتالي

Scien

mod

sinh

sinh<sup>-1</sup>

π

sin

sin<sup>-1</sup>

## Question No. 7

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

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

Save & Next حفظ والتالي

Scientific Ca

mod

e Deg

sinh

cosh

sinh<sup>2</sup>cosh<sup>2</sup>

π

e

sin

cos

sin<sup>-1</sup>cos<sup>-1</sup>

Total questions in exam: 25 | Answered: 2

## Question No. 8

Which of the following functions is not one-to-one

- $F = \{ (-3, -2), (0, 4), (3, 2), (1, -5) \}$
- $F = \{ (6, -3), (0, 5), (4, -2), (1, -3) \}$
- $F = \{ (4, -3), (1, 0), (5, -2), (1, 3) \}$
- $F = \{ (3, 5), (6, 0), (7, -2), (1, -5) \}$

Save &amp; Next حفظ والتالي

Scientific Calculator

mod

Deg

sinh

cosh

sinh<sup>-1</sup>cosh<sup>-1</sup>

π

e

sin

cos

sin<sup>-1</sup>cos<sup>-1</sup>

Total questions in exam: 25 | Answered: 4

Question No. 9

Find the value of  $a$  such that the remainder of  $\frac{3x^3 + 10x^2 + ax + 3}{x + 1}$  is zero.

- 1  
 -4  
 10  
 0

Save & Next حفظ والتالي

Scientific Calculator

mod	Deg	Rad	MC	MR			
sinh	cosh	tanh	Exp	( )	←		
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>2</sub> x	ln	log	7	8
π	e	n!	log <sub>10</sub> x	e <sup>x</sup>	10 <sup>x</sup>	4	5
sin	cos	tan	x <sup>y</sup>	x <sup>2</sup>	x <sup>3</sup>	1	2
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	√x	∛x	x	0	

Total questions in exam: 25 | Answered: 4

## Question No. 10

Give the y-intercept of the line  $3y - x = 0$ 

- 3
- 1
- 0
- 3

Save &amp; Next حفظ والتالي

## Scientific Calculator

mod

 Deg  Rad

sinh

cosh

tanh

Exp

sinh<sup>-1</sup>cosh<sup>-1</sup>tanh<sup>-1</sup>log<sub>2</sub>x

ln

π

e

n!

log<sub>y</sub>xe<sup>x</sup>

sin

cos

tan

x<sup>y</sup>x<sup>2</sup>sin<sup>-1</sup>cos<sup>-1</sup>tan<sup>-1</sup><sup>y</sup>/<sub>x</sub><sup>3</sup>/<sub>√</sub>

Total questions in exam: 25 | Answered: 4

## Question No. 11

If 5 is a zero of  $f(x) = x^3 - 8x^2 + 11x + 20$ , then other zeros are

- 4, 1
- 4, 1
- 4, -1
- 4, -1

Save & Next حفظ و التالي

## Scientific Calculator

mod				<input checked="" type="radio"/> Deg	<input type="radio"/> Rad
sinh	cosh	tanh	Exp		
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>x</sub>		
π	e	n!	log <sub>y</sub>		
sin	cos	tan	x <sup>y</sup>		
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	√x		

Total questions in exam: 25 | Answered: 4

Question No. 12

The degree of the quotient of the division  $(x^8 - 4x^3 + x + 9) \div (x - 3)$  equals:

- 8  
 9  
 6  
 7

Save &amp; Next حفظ والتالي

Scientific Calculator

mod  Deg  Rad

sinh	cosh	tanh	Exp	(	)
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>2</sub> x	ln	log
π	e	n!	log <sub>10</sub> x	e <sup>x</sup>	10 <sup>x</sup>
sin	cos	tan	x <sup>y</sup>	x <sup>2</sup>	x <sup>3</sup>
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	√x	∛x	x

Total questions in exam: 25 | Answered: 4

## Question No. 13

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

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

Save &amp; Next حفظ والتالي

## Scientific Calculator

mod

 Deg  Rad

sinh	coth	tanh	Exp
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>2</sub> x
π	e	n!	log <sub>y</sub> x
sin	cos	tan	x <sup>y</sup>
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	<sup>3</sup> √x



Question No. 14

The solution of  $14 \leq 3x + 5 \leq 23$  is .....

- (-6, 3)
- [3, 5]
- (3, 6)
- [-6, -3]

Save & Next حفظ و التالي

Scientific Calcul

mod

Deg Rad

sinh

cosh

sinh<sup>-1</sup>cosh<sup>-1</sup>

π

e

sin

cos

sin<sup>-1</sup>cos<sup>-1</sup>

Question No. 15

Given that  $f(x) = 4^{2x-1} + 1$ . Then  $f(1) =$ 

- 16
- 14
- 17
- 15

Save &amp; Next حفظ و التالي

Scientific Calculator

mod  Deg  Rad

sinh	cosh	tanh	Exp
sinh <sup>-1</sup>	cosh <sup>-1</sup>	tanh <sup>-1</sup>	log <sub>2</sub> x
π	e	n!	log <sub>10</sub> x
sin	cos	tan	x <sup>y</sup>
sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	√x

Total questions in exam: 25 | Answered: 0

## Question No. 18

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

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

Save &amp; Next

Total questions in exam: 25 | Answered: 0

Question No. 17

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

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

Save & Next حفظ و التالي

Total questions in exam: 25 | Answered: 0

Question No. 24

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

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

Save &amp; Next

Question No. 6

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

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

Total questions in exam: 25 | Answered: 0

Question No. 18

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

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

Save & Next

If  $p(x) = \sqrt{x+3}$  and  $q(x) = \sqrt{x-4}$ . Evaluate  $(p \cdot q)(1)$ .

 -12  $-2\sqrt{3}$   $2\sqrt{3}$  undefined

9



Total questions in exam: 25 | Answered: 0

Question No. 18

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

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

Save & Next

Question No. 3

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.
- $f(x + a) = 0$ .

Question No. 3

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.
- $f(x + a) = 0$ .

## Question No. 14

Find the value of  $a$  such that the remainder of  $\frac{3x^2 + 10x^2 + ax + 3}{x + 1}$  is zero.

- 0
- 10
- 1
- 4

Total questions in exam: 25 | Answered: 0

Question No. 15

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

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

Question No. 19

Find the function  $f(x)$  such that  $(fg)(x) = \frac{3}{x^3 - x}$ , where  $g(x) = \frac{3}{x - 1}$ .

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

Save & Next حفظ و التالي

## Question No. 21

The equation  $x = 2 - \log_2 y$  is equivalent to the equation

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

Total questions in exam: 25 | Answered: 0

Question No. 1

The quotient of the division  $(x^4 - x^3 - 5x^2 - 3x + 2) \div (x - 1)$  is

- $x^3 - 5x - 8$
- $x^3 + 5x + 8$
- $x^3 - 5x^2 - 8$
- $x^3 + 5x^2 + 8$



Total questions in exam: 25 | Answered: 0

Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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

Question No. 6

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

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

Question No. 5

If  $p(x) = \sqrt{x+3}$

and  $q(x) = \sqrt{x-4}$ .

Evaluate  $(p \cdot q)(1)$ . -12  $-2\sqrt{3}$   $2\sqrt{3}$  undefined

Question No. 5

If  $p(x) = \sqrt{x+3}$

and  $q(x) = \sqrt{x-4}$

Evaluate  $(p \cdot q)(1)$ .

-12

$-2\sqrt{3}$

$2\sqrt{3}$

 undefined

Total questions in exam: 25 | Answered: 0

Question No. 1

The quotient of the division  $(x^4 - x^3 - 5x^2 - 3x + 2) \div (x - 1)$  is

- $x^3 - 5x - 8$
- $x^3 + 5x + 8$
- $x^3 - 5x^2 - 8$
- $x^3 + 5x^2 + 8$

Total questions in exam: 25 | Answered: 0

Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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

Question No. 6

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

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

Question No. 5

If  $p(x) = \sqrt{x+3}$

and  $q(x) = \sqrt{x-4}$

. Evaluate  $(p \cdot q)(1)$ . -12  $-2\sqrt{3}$   $2\sqrt{3}$  undefined



Question No. 1

The quotient of the division  $(x^4 - x^3 - 5x^2 - 3x + 2) \div (x - 1)$  is

- $x^3 - 5x - 8$
- $x^3 + 5x + 8$
- $x^3 - 5x^2 - 8$
- $x^3 + 5x^2 + 8$

Save &amp; Next

## Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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

Question No. 6

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

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

If  $p(x) = \sqrt{x+3}$  and  $q(x) = \sqrt{x-4}$ . Evaluate  $(p \cdot q)(1)$ .

 -12  $-2\sqrt{3}$   $2\sqrt{3}$  undefined

9

Question No. 4

The solution of the exponential equation  $2^{x-1} = 4^x$  is

- $x = -1$
- $x = 1$
- $x = 4$
- $x = 2$

Question No. 3

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.
- $f(x + a) = 0$ .

Total questions in exam: 25 | Answered: 0

Question No. 7

The domain and the range of  $f(x) = 2x$  is

- all real numbers
- all negative real numbers
- all positive real numbers
- all non-zero real numbers

Total questions in exam: 25 | Answered: 0

## Question No. 8

The solution of  $14 \leq 3x + 5 \leq 23$  is .....

- [-6, -3]
- (3, 6)
- (-6, -3)
- [3, 6]



Question No. 9

Given that  $f(x) = 4^{3x-1} + 1$ . Then  $f(1) =$

- 15
- 17
- 16
- 14

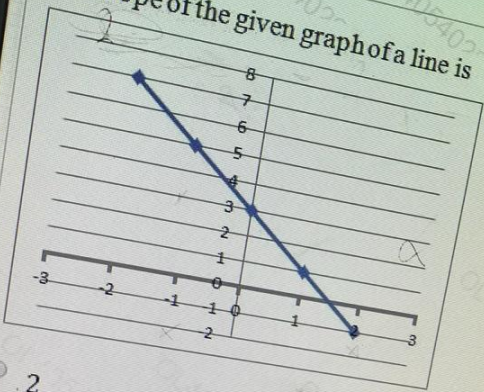
**Question No. 10**

Which of the following statements is always true.

- 1
- The graph of a quadratic function is a straight line.
  - The graph of a quadratic function passes through the point  $(0, 0)$ .
  - The range of a quadratic function is the set of all real numbers.
  - The axis of symmetry passes through the vertex.

Question No. 13

The slope of the given graph of a line is



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

Question No. 11

The solution set of  $-4|6 - x| + 4 \leq -20$  is

- 2
- $(-\infty, 10] \cup [2, \infty)$
  - $(-\infty, 2] \cup [10, \infty)$
  - $(-\infty, 0] \cup [12, \infty)$
  - $(-\infty, 12] \cup [0, \infty)$

Question No. 12

The function  $f(x) = 3x + x^2 - 6$  is

- Linear
- Cubic
- Quartic
- Quadratic

**Question No. 10**

Which of the following statements is always true.

- 2
- The graph of a quadratic function is a straight line.
  - The graph of a quadratic function passes through the point  $(0, 0)$ .
  - The range of a quadratic function is the set of all real numbers.
  - The axis of symmetry passes through the vertex.

Online Evaluation System  
Total questions in exam: 25 | Answered: 0

Question No. 14

Find the value of  $a$  such that the remainder of  $\frac{3x^3 + 10x^2 + ax + 3}{x + 1}$  is zero.

- 0
- 10
- 1
- 4

Total questions in exam: 25 | Answered: 0

## Question No. 15

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 &amp; Next



Total questions in exam: 25 | Answered: 0

Question No. 1

The quotient of the division  $(x^4 - x^3 - 5x^2 - 3x + 2) \div (x - 1)$  is

- $x^3 - 5x - 8$
- $x^3 + 5x + 8$
- $x^3 - 5x^2 - 8$
- $x^3 + 5x^2 + 8$

Total questions in exam: 25 | Answered: 0

## Question No. 14

Find the value of  $a$  such that the remainder of  $\frac{3x^3 + 10x^2 + ax + 3}{x + 1}$  is zero.

- 0
- 10
- 1
- 4

Total questions in exam: 25 | Answered: 0

## Question No. 18

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

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

Save &amp; Next

Total questions in exam: 25 | Answered: 0

## Question No. 19

Find the function  $f(x)$  such that  $(fg)(x) = \frac{3}{x^3 - x}$ , where  $g(x) = \frac{3}{x-1}$ .

- $\frac{1}{x^2 + x}$
- $\frac{1}{x^2 - 1}$
- $\frac{1}{x^2 - x}$
- $\frac{3}{x-1}$

Save &amp; Next

Total questions in exam: 25 | Answered: 0

Question No. 16

Which of the following functions is not one-to-one

2

- $F = \{ (3,5), (6,0), (7,-2), (1,-5) \}$
- $F = \{ (4,-3), (1,0), (5,-2), (1,3) \}$
- $F = \{ (-3,-2), (0,4), (3,2), (1,-5) \}$
- $F = \{ (6,-3), (0,5), (4,-2), (1,-3) \}$

Save & Next

Total questions in exam: 25 | Answered: 0

Question No. 17

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

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

Save & Next حفظ و التالي

Total questions in exam: 25 | Answered: 0

## Question No. 17

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

- 2
- $y = -3$
  - $x = 3$
  - $x = 5$
  - $y = 3$
- $\alpha$
- x

Save &amp; Next

Total questions in exam: 25 | Answered: 0

Question No. 20

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

- $\left\{ \frac{3}{2}, \frac{5}{2} \right\}$
- $\emptyset$
- $\left\{ \frac{5}{2} \right\}$
- $\left\{ \frac{3}{2} \right\}$

Save &amp; Next



Total questions in exam: 25 | Answered: 0

## Question No. 21

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

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

Save & Next حفظ و التالي

Total questions in exam: 25 | Answered: 0

## Question No. 22

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

- 2
- 3
- 2
- 3

Save &amp; Next

**Question No. 10**

Which of the following statements is always true.

- 2
- The graph of a quadratic function is a straight line.
  - The graph of a quadratic function passes through the point  $(0, 0)$ .
  - The range of a quadratic function is the set of all real numbers.
  - The axis of symmetry passes through the vertex.

Total questions in exam: 25 | Answered: 0

Question No. 18

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

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

Save & Next

Total questions in exam: 25 | Answered: 0

Question No. 24

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

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

Save &amp; Next

Total questions in exam: 25 | Answered: 0

Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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

**Question No. 10**

Which of the following statements is always true.

- 2
- The graph of a quadratic function is a straight line.
  - The graph of a quadratic function passes through the point  $(0, 0)$ .
  - The range of a quadratic function is the set of all real numbers.
  - The axis of symmetry passes through the vertex.

Total questions in exam: 25 | Answered: 0

Question No. 18

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

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

Save & Next



Total questions in exam: 25 | Answered: 0

Question No. 24

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

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

Save &amp; Next

Total questions in exam: 25 | Answered: 0

Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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

Question No. 7

Find  $(f \circ g)(x)$ , where

$$f(x) = x^2 + x, \quad g(x) = \sqrt{x-1}.$$

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

b

Question No. 3

Determine the solution set of the following inequality

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

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



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

- A.  $a = -1$   
 B.  $a = 1$   
 C.  $a = -\frac{1}{2}$   
 (D)  $a = 0$

$$\begin{array}{r} 3x + 3a = x + a \\ -x \quad -x \\ 2x + 3a = a \\ -3a \quad -3a \\ 2x = -2a \\ \boxed{x = -a} \end{array}$$

or

$$\begin{array}{r} 2x + 3a = -(x + a) \\ 2x + 3a = -x - a \\ +x \quad +x \\ 3x + 3a = -a \\ -3a \quad -3a \\ 3x = -4a \\ \boxed{x = -\frac{4}{3}a} \end{array}$$

From (D) to get  
 one solution  
 $-a = -\frac{4}{3}a$   
 $-a + \frac{4}{3}a = 0$   
 $a(-1 + \frac{4}{3}) = 0$   
 $\boxed{a = 0}$

4. Solve the following inequality:  $-2 < 2x - 4 < 2$

$$-2 < 2x - 4 < 2 \Rightarrow x > 2$$

Question No. 21

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

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



- 15
- 17
- 16
- 14

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Total questions in exam: 25 | Answered: 0

## Question No. 10

Which of the following statements is always true.

- D
- The graph of a quadratic function is a straight line.
  - The graph of a quadratic function passes through the point  $(0, 0)$ .
  - The range of a quadratic function is the set of all real numbers.
  - The axis of symmetry passes through the vertex.

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Total questions in exam: 25 | Answered: 0

## Question No. 2

Let  $a \in \mathbb{R}$ . Give the value of  $a$  such that the point  $(a, a)$  belongs to the line  $ax + 4y = -4$ .

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