تسريبات الرياضيات كويز 2 محلوله 1440
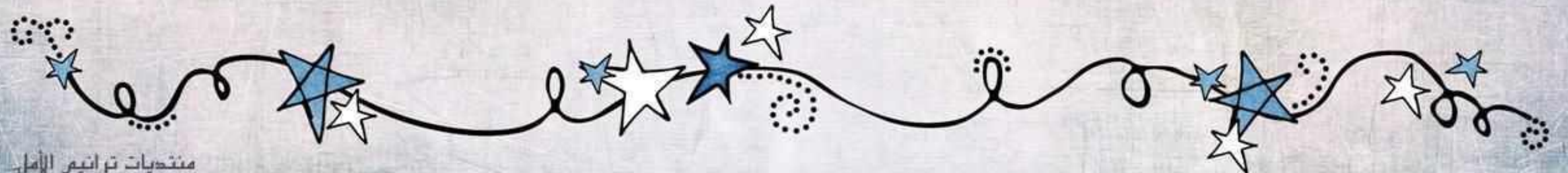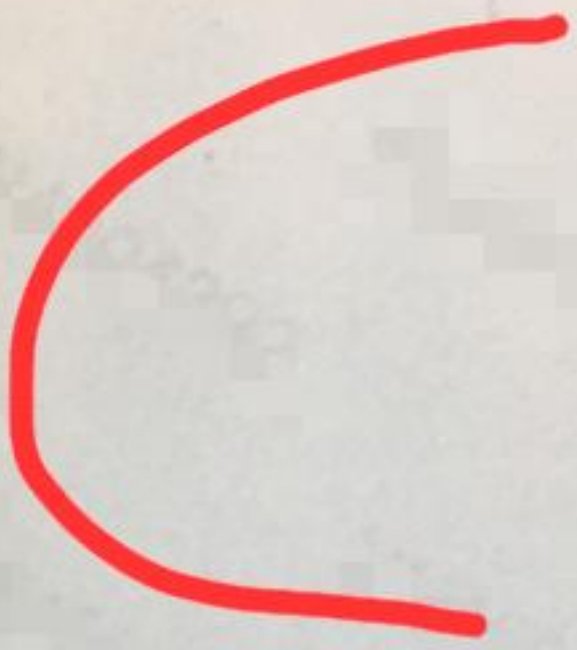
دعواتكم ❤️

Find the slope of the line through the points (-4,8),(2,-3)

- $\dfrac{11}{6}$
- $-\dfrac{6}{11}$
- $-\dfrac{11}{6}$
- $\dfrac{6}{11}$

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Question No. 3

Determine the olution set of the following inequality

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

- ○ $(-3, -1]$
- ○ $[-3, -1)$
- ○ $[-1, 3)$
- ◉ $(-1, 3]$

Question No. 1

The roots of $x^2 = -3x - 6$ are

$\dfrac{-3 \pm \sqrt{15}}{2}$

$\dfrac{-3 \pm i\sqrt{15}}{2}$

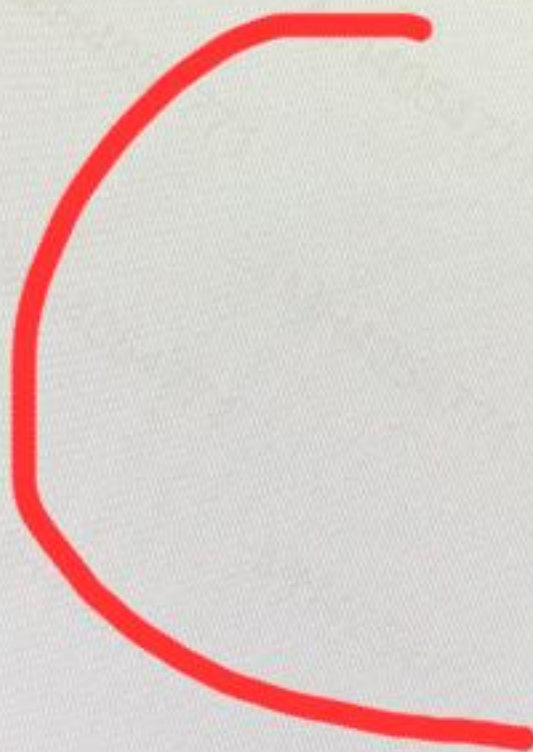$\dfrac{3 \pm i\sqrt{15}}{2}$

$\dfrac{-3 \pm \sqrt{33}}{2}$

Save & Next منتقلوم

Question No. 9

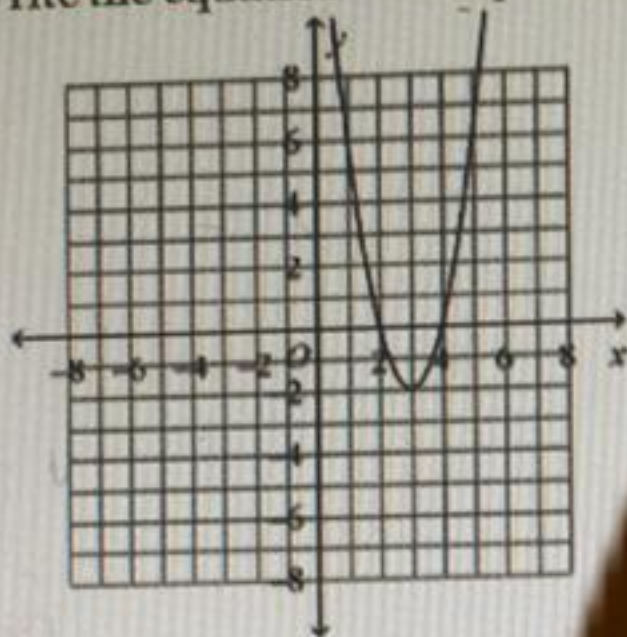The range of the function $f(x) = 1 - \frac{3}{2+x}$ is

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

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Total questions in exam: **25** | Answered: **1**

Question No. 6

Write the equation of this parabola in vertex form.

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

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The solution set of $\quad x^2 - 3x - 6$ is

- $\{3 \pm \sqrt{33}\}$

- $\left\{\dfrac{3 \pm \sqrt{5}}{2}\right\}$
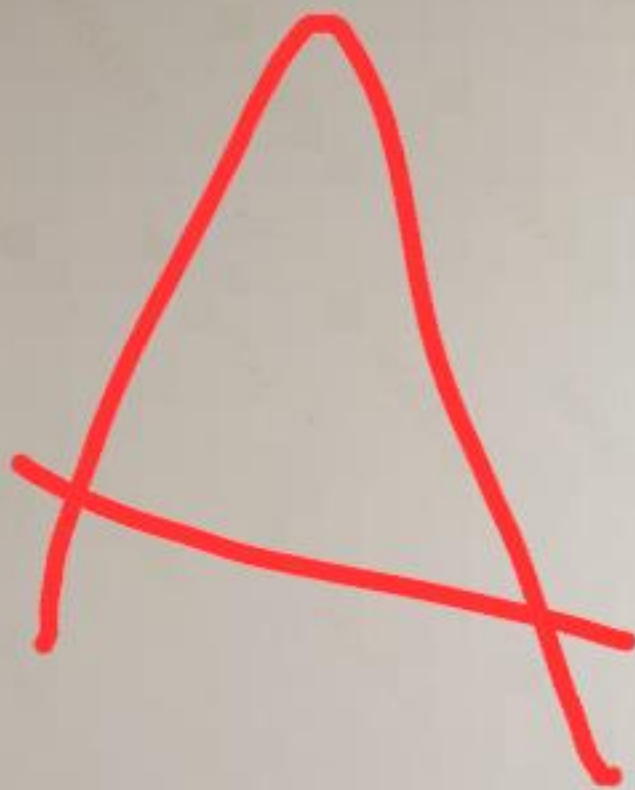
- $\{3 \pm \sqrt{5}\}$

- $\left\{\dfrac{3 \pm \sqrt{33}}{2}\right\}$

Question No. 4

Solve the inequality $|x^2 - 5x + 4| \le 0$.

- $S = [4, +\infty)$
- $S = \{1, 4\}$
- $S = (1, +\infty)$
- $S = (1, 4)$

Question No. 10

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

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

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Question No. 2

Let $f(x) = x^2 + c$ and $g(x) = x$, give the value of c such that $f(x+1) = xg(x) + 2x$.
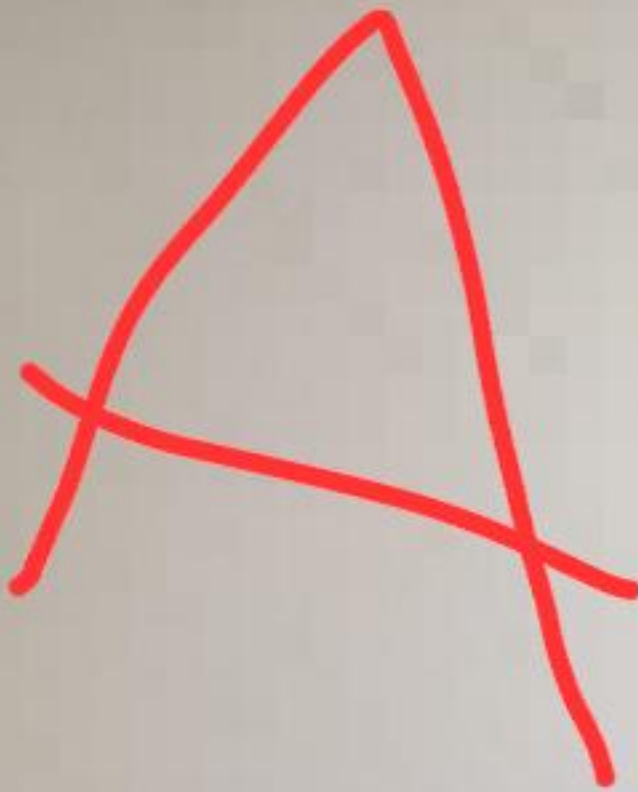
- $c = -1$
- $c = 1$
- $c = 0$
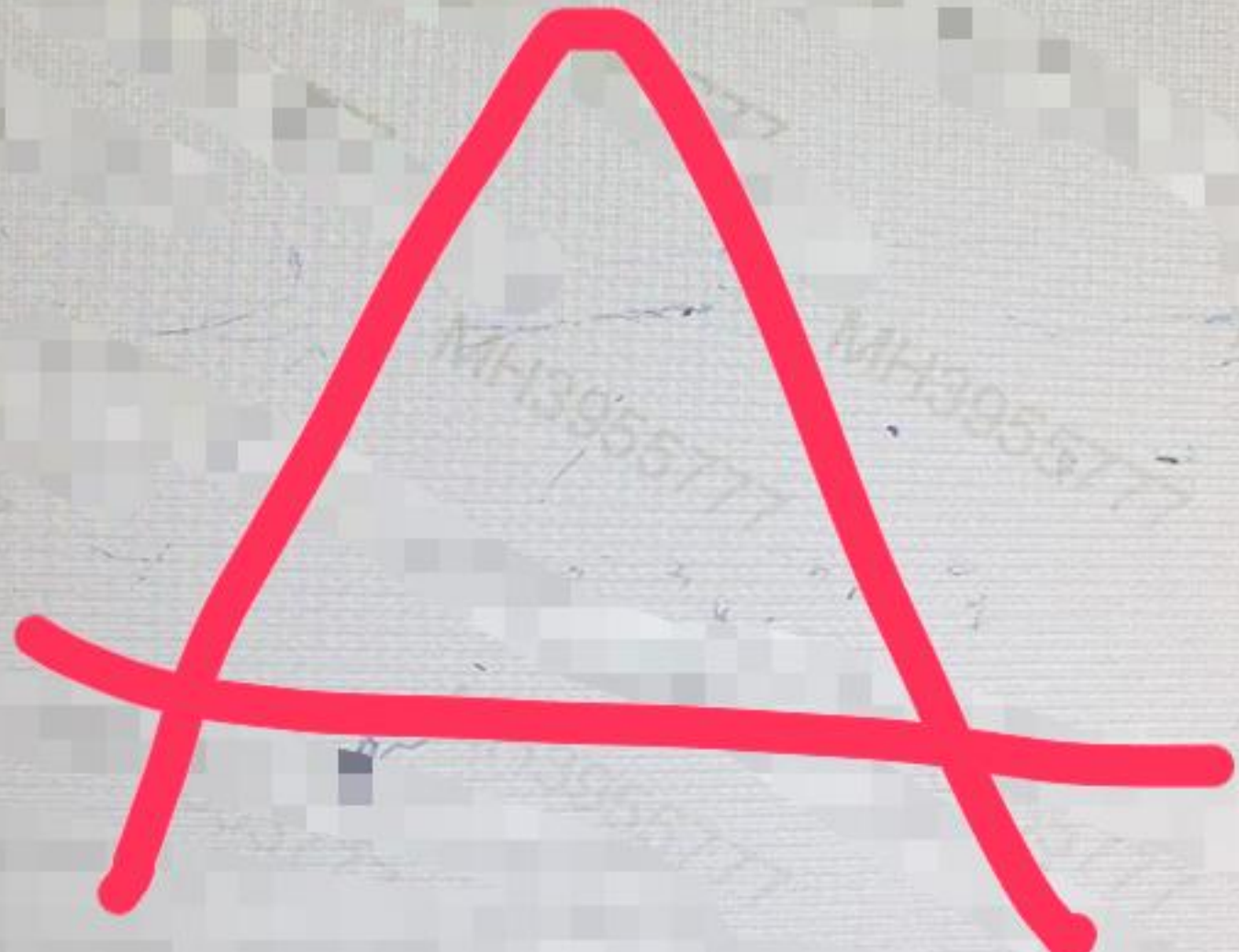- $c = 4$

Question No. 7

Solve $6n - 4 \geq 2n + 16$

- $[5, \infty)$
- $[3, \infty)$
- $(5, \infty)$
- $(3, \infty)$

Next

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

- ○ constant
- ○ increasing
- ○ decreasing
- ○ not defined

Question No. 17

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

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

Give the domain of the function $f(x) = \dfrac{x^2 + 2x - 1}{\sqrt{4 - |2x + 4|}}$.
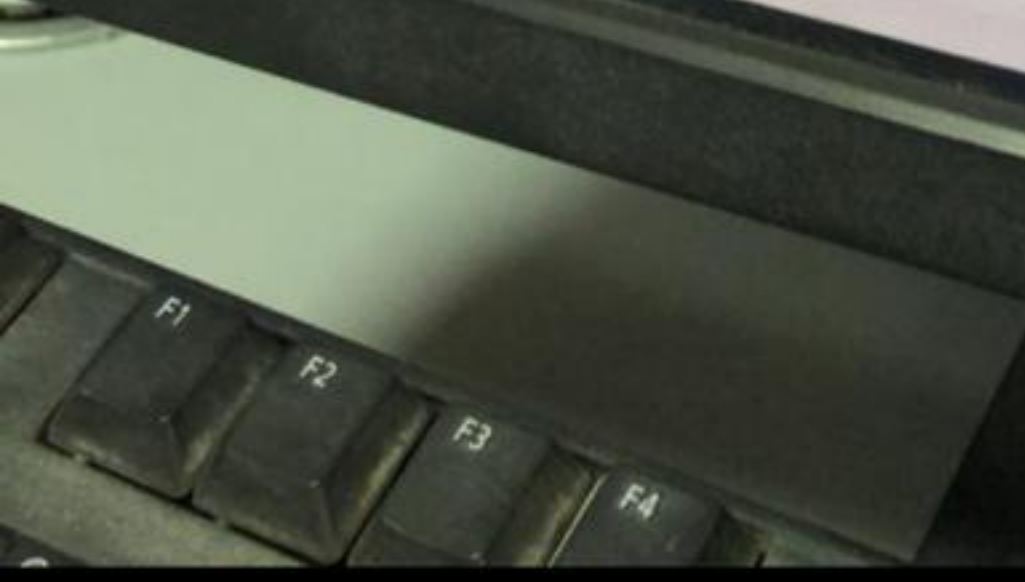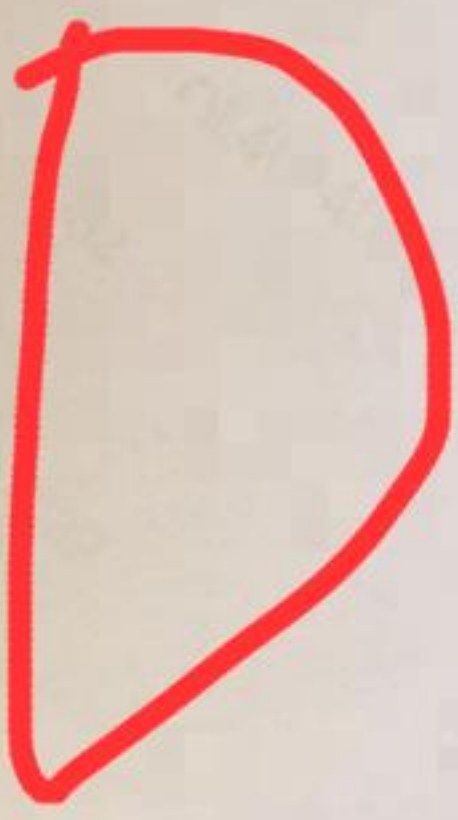
- $(-\infty, 0)$
- $(-4, 0)$
- $(0, 4)$
- $\mathbb{R}$

Total questions in exam.

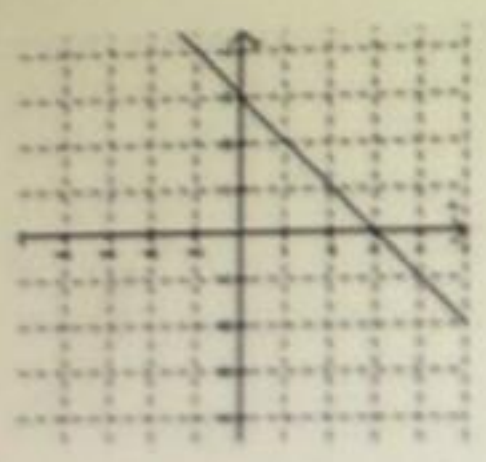Question No. 25

The range of the relation $y \leq x - 1$ is

- $(-\infty, \infty)$
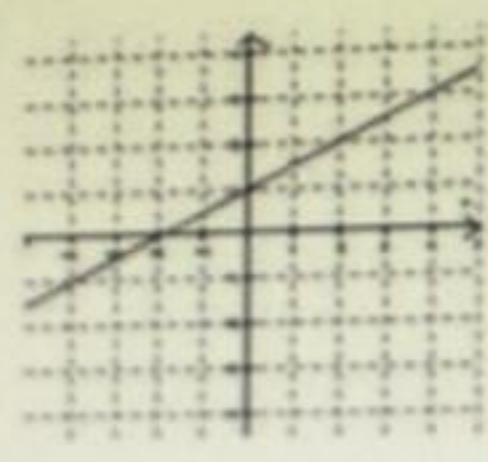- $[-4, \infty)$
- $(4, \infty)$
- $[0, \infty)$

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Total questions in exam: 25 | Answered: 16

Question No.

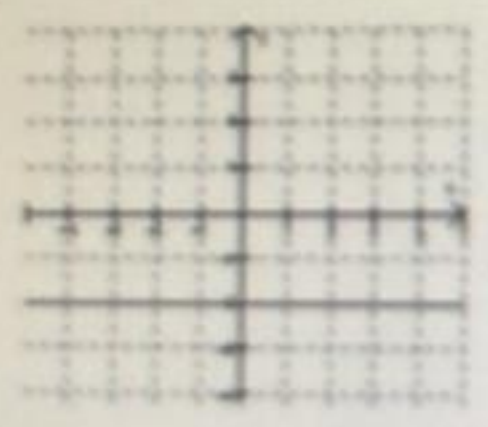Which line has a negative slope?

I

II

III

IV

- I
- III
- IV
- II

Total questions in exam: **25** | Answered: **19**

Question No. 13

The solution set of $5x^2 - 35x = 0$ is

- $\{0,5\}$
- $\{0,7\}$
- $\{5,-7\}$
- $\{0,5,7\}$

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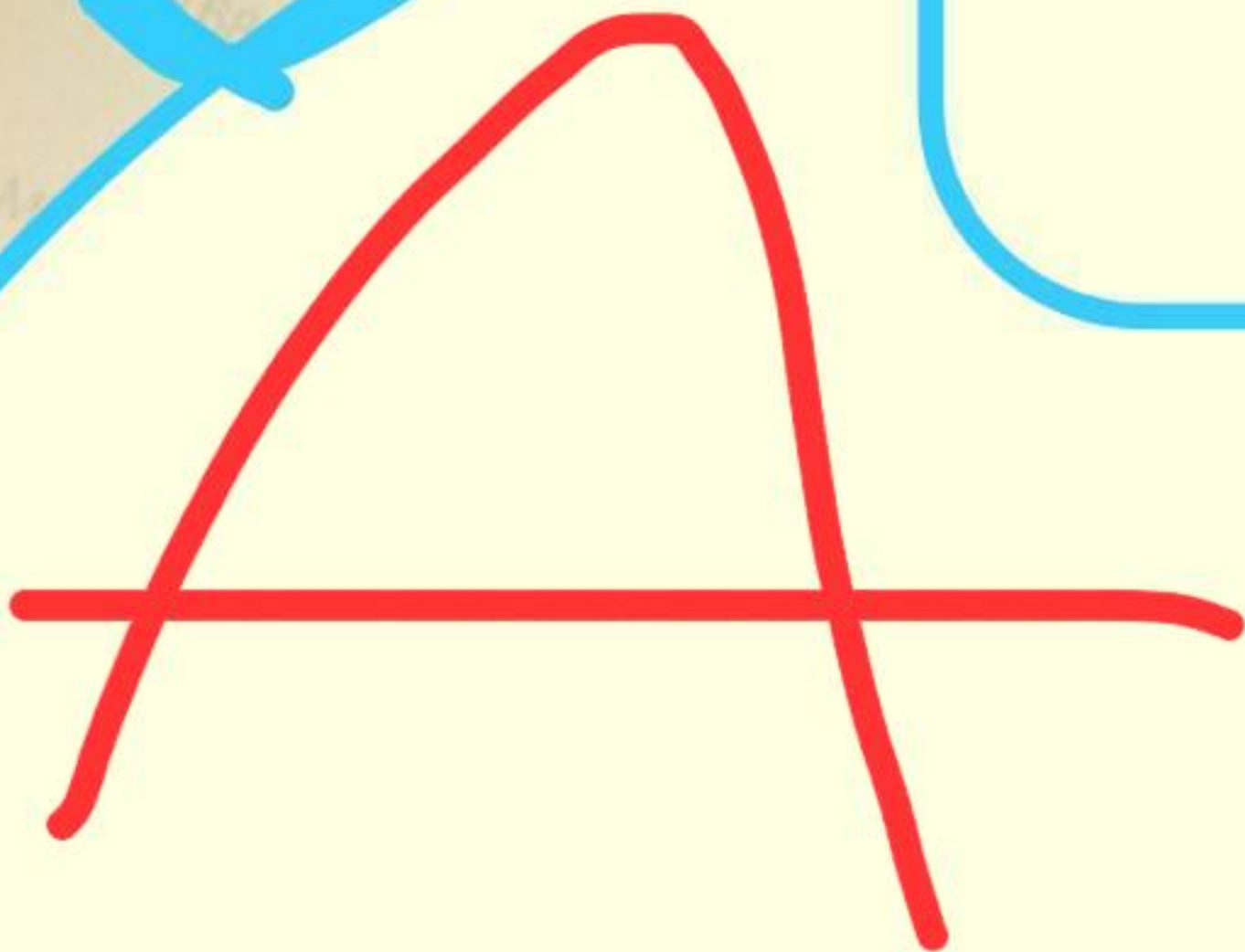
Question No. 23

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

- $f(x) = \sqrt{81 - x^2}$
- $f(x) = x$
- $f(x) = 8 + 16x$
- $f(x) = -2x + 5$

Suppose $a, b \in \mathbb{R}$ and $b > 0$. The solution of the inequality $0 < |x - a| < b$ is

- $(a - b, a) \cup (a, b)$
- $(a - b, a) \cup (a, a + b)$
- $(-b, a) \cup (a, a + b)$
- $(a - b, a] \cup (a, b)$

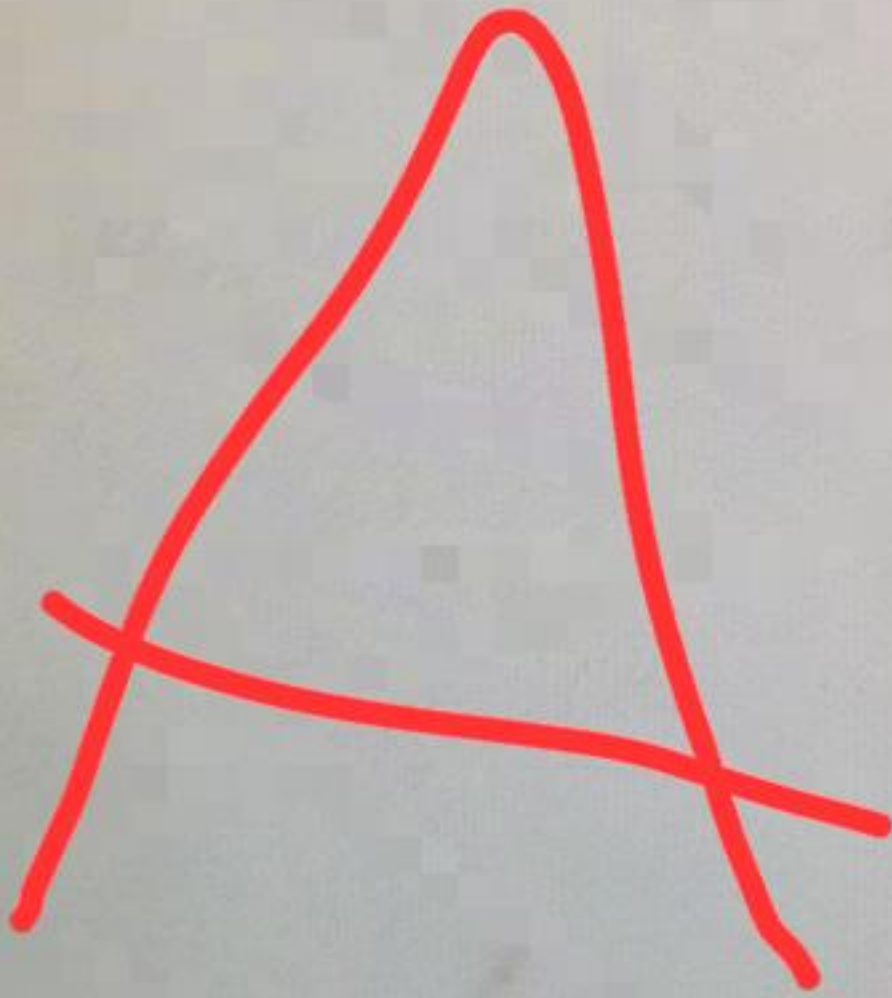Question No. 3

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

$\left(-\infty, \frac{1}{7}\right)$

$\emptyset$

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

$\left(\frac{1}{7}, \frac{15}{7}\right)$

Save & Next منع وتالي
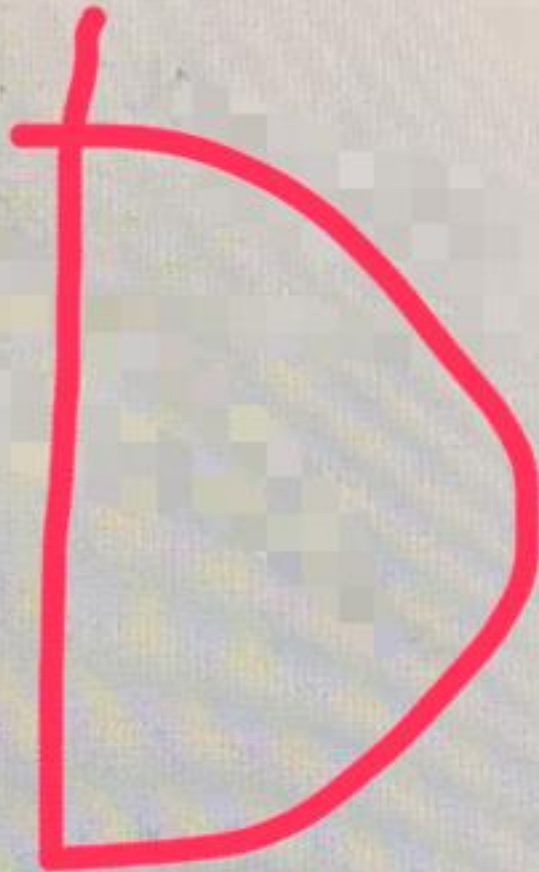
Question No. 22

The function has an inverse if

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

Question No. 21

The slope of the horizontal line is

- 1
- −1
- Undefined
- 0

Question No. 24

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

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

Question No

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

Solve the inequality $|x^2 - 5x + 4| \leq 0$.

- $S = [4, +\infty)$
- $S = \{1, 4\}$
- $S = (1, +\infty)$
- $S = (1, 4)$

Total questions in exam: 25 | Answered: 9
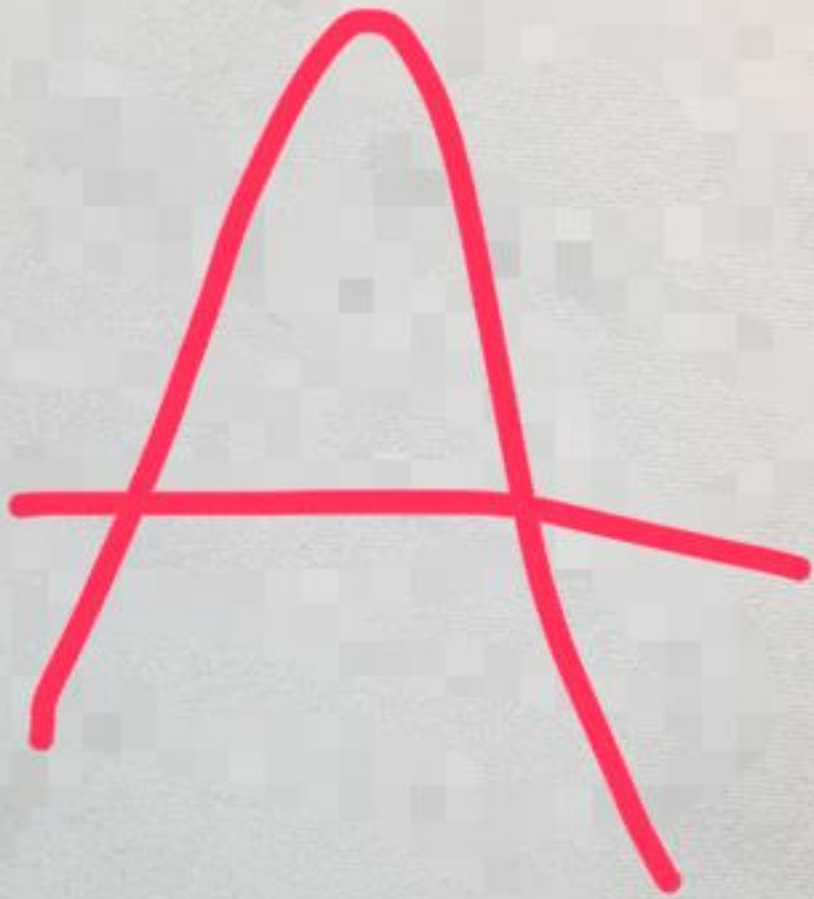
Question No. 18

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

○ $(f \cdot g)(x) = \dfrac{12}{(x-2)(x+5)}$

○ $(f \cdot g)(x) = \dfrac{12}{x-10}$

○ $(f \cdot g)(x) = \dfrac{12}{x^2-10}$

○ $(f \cdot g)(x) = \dfrac{7}{(x-2)(x+5)}$

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Question No. 11

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 $x^2 + x + 2$.

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

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Question No. 23
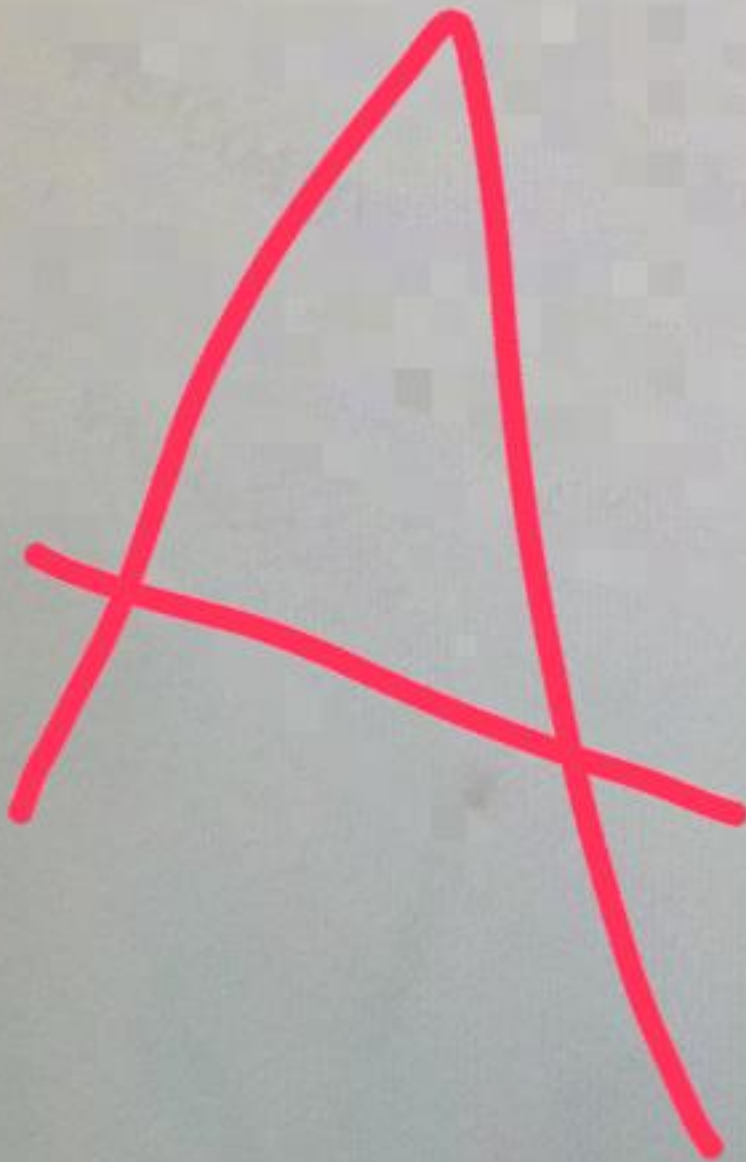
Find the domain of $f(x) = \dfrac{2}{\sqrt{|x|-3}}$.

- $(-3, 3)$.
- $(-\infty, -3] \cup [3, \infty)$.
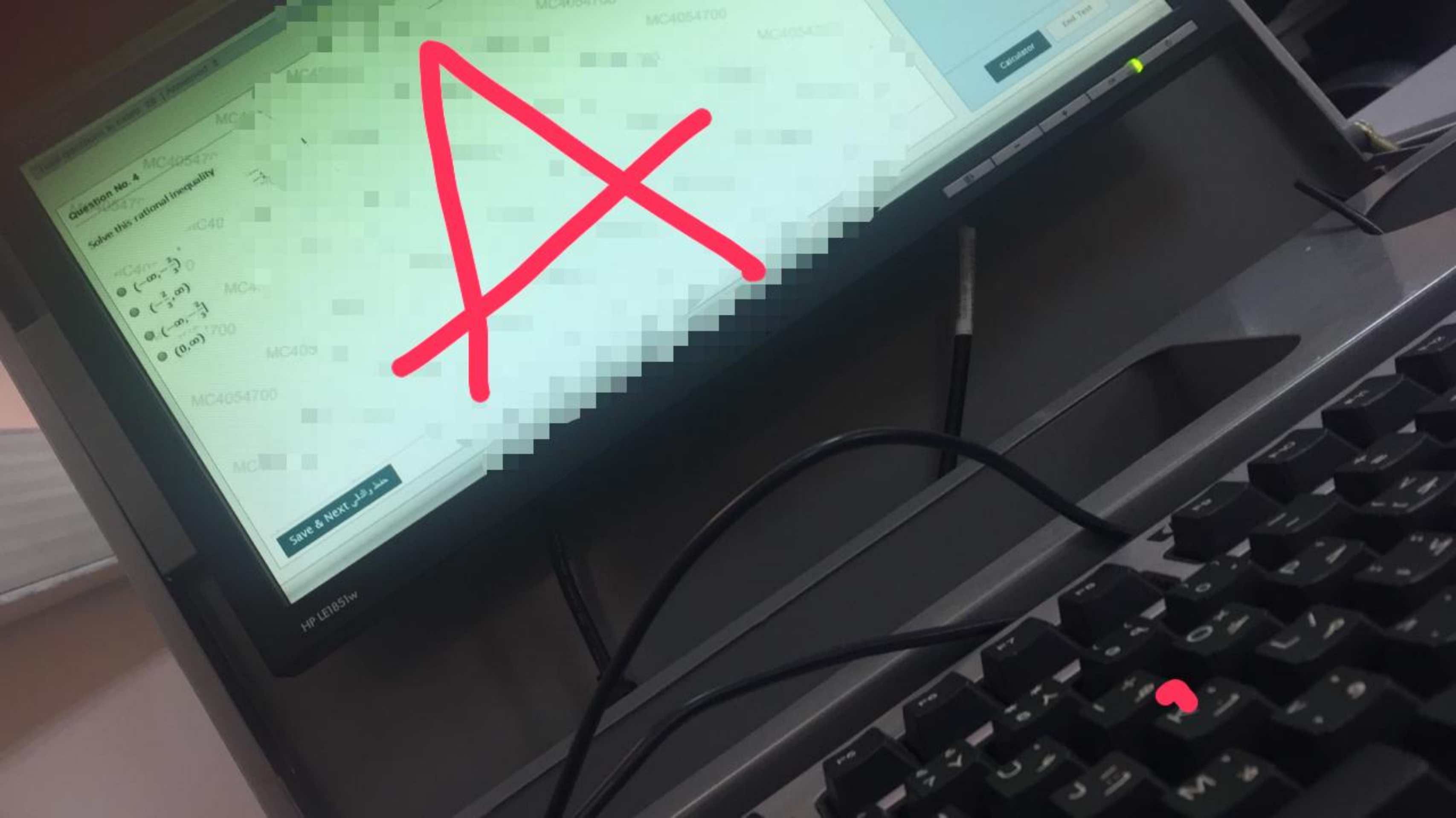- $[-3, 3]$.
- $(-\infty, -3) \cup (3, \infty)$.

Total questions in exam: **25** | Answered: **10**

Question No. 2

The function has an inverse if

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

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Question No. 4

Solve this rational inequality

$$\frac{3}{x} < 0$$

- ($-\infty$, $-\frac{2}{3}$) 0
- ($-\frac{2}{3}$, ∞)
- ($-\infty$, $\frac{2}{3}$)
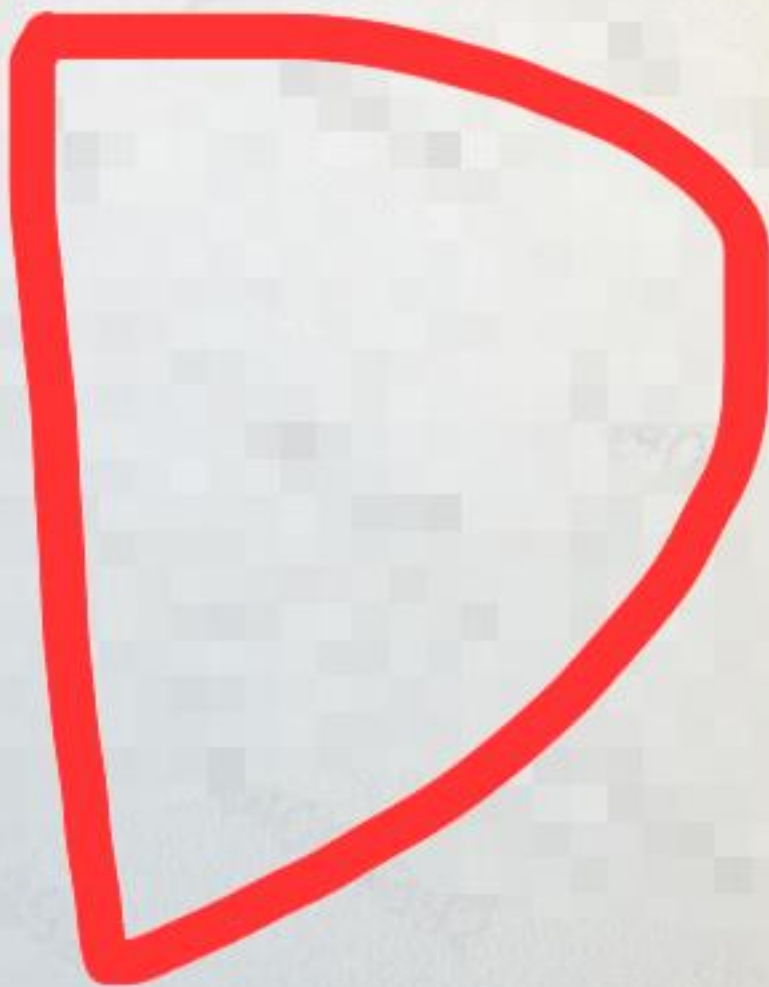- (0, ∞)

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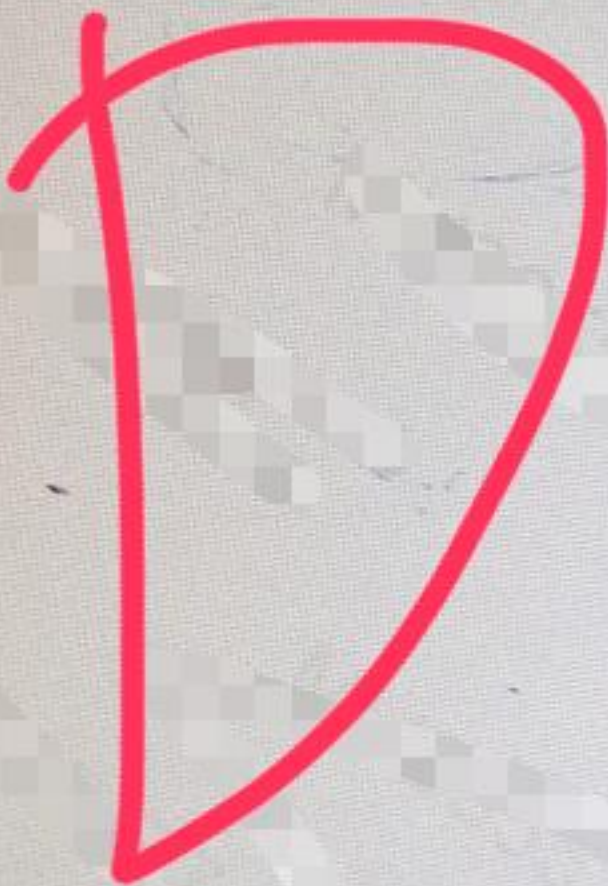
- $a = \frac{2}{3}$
- $a = -\frac{3}{2}$
- $a = -\frac{2}{3}$
- $a = \frac{3}{2}$

Question No. 13
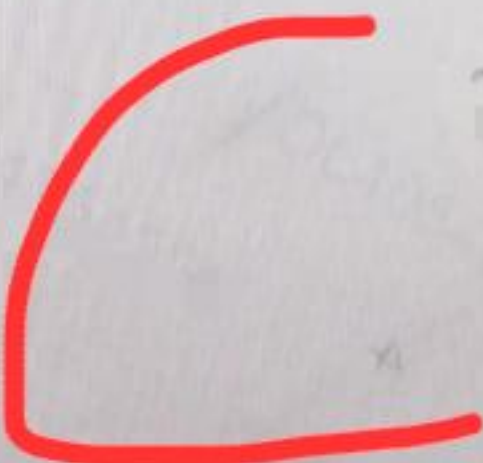
Give the x-intercept of the line $y = 6x - 12$
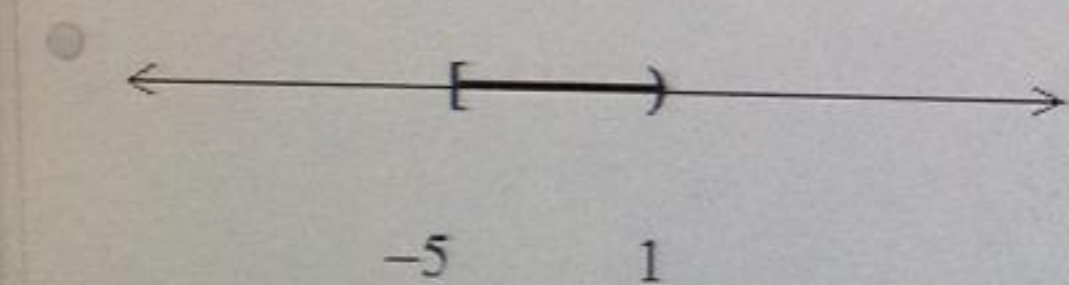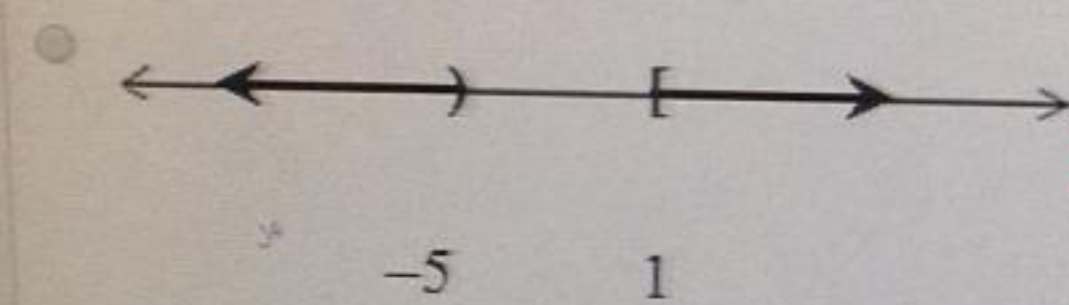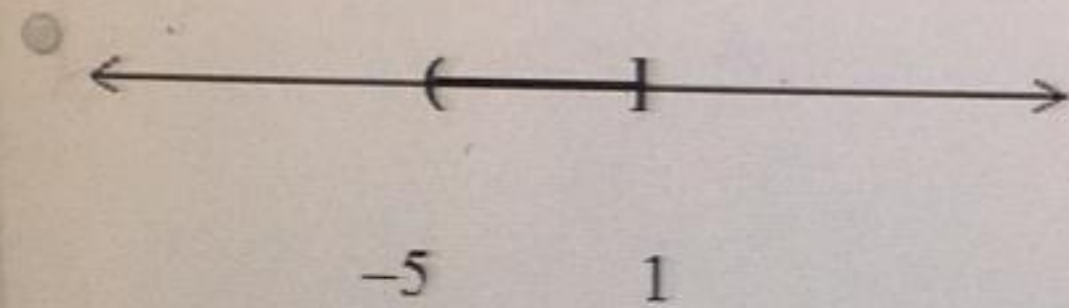
- ○ -3
- ○ -2
- ○ -5
- ○ 2

Save & Next حفظ و التالي

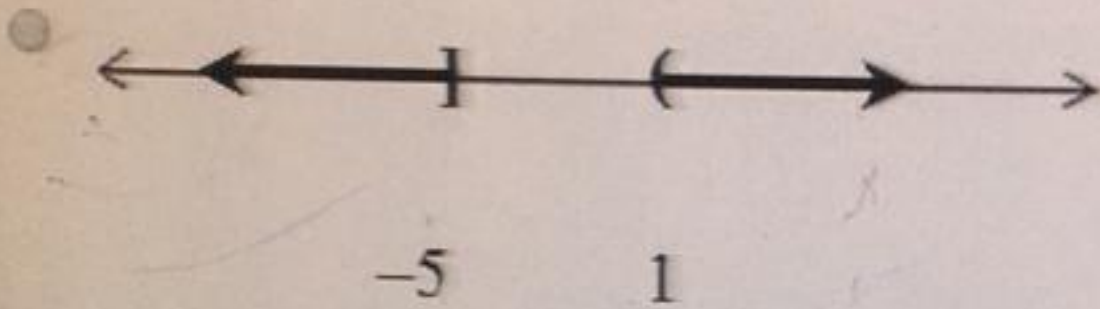## Question No. 11

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

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

Question No. 25

Which of the following represent $x \leq -5$ or $x > 1$

-5   1

-5   1

-5   1

-5   1

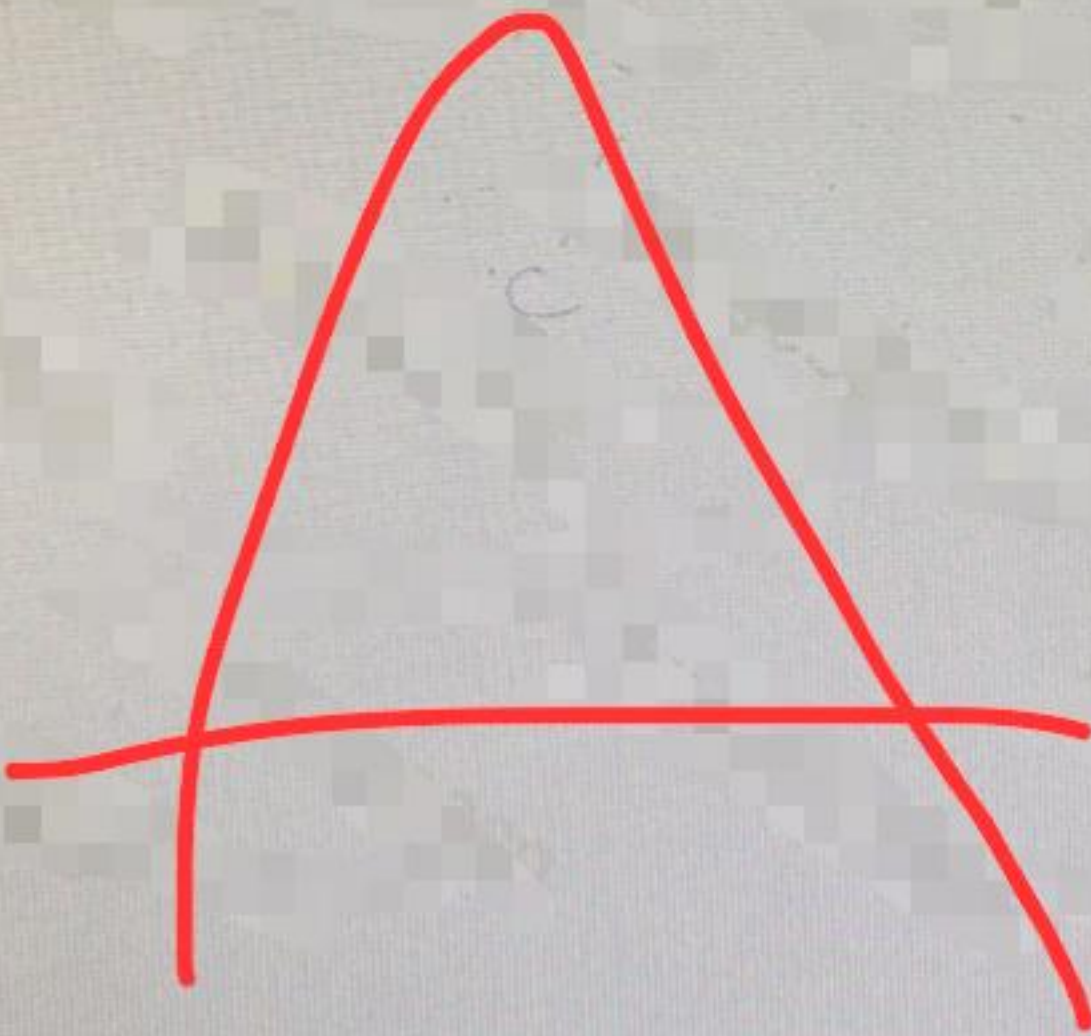## Qu...

A function is one-to-one if

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

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

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

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The solution set of $5x^2 - 35x = 0$ is

- {5,-7}
- {0,7}
- {0,5,7}
- {0,5}

Question No. 6

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

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

B

Question No

The domain of the function $f(x) = x^2 - 4x + 7$ is

- $[7, \infty)$
- $(-\infty, 7]$
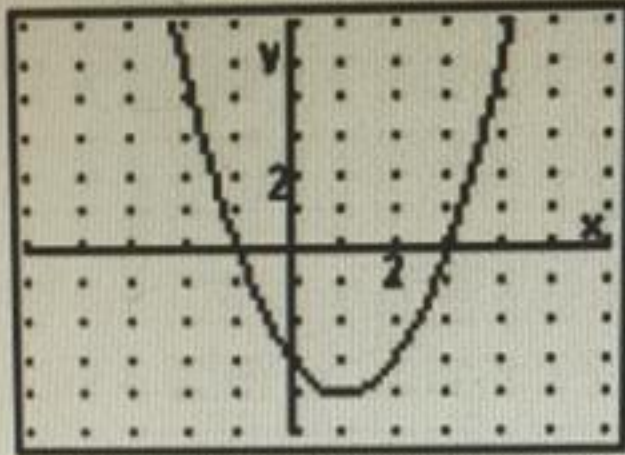- $(-\infty, \infty)$
- $[-4, \infty)$

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Total questions in exam: 25 | Answered: 10
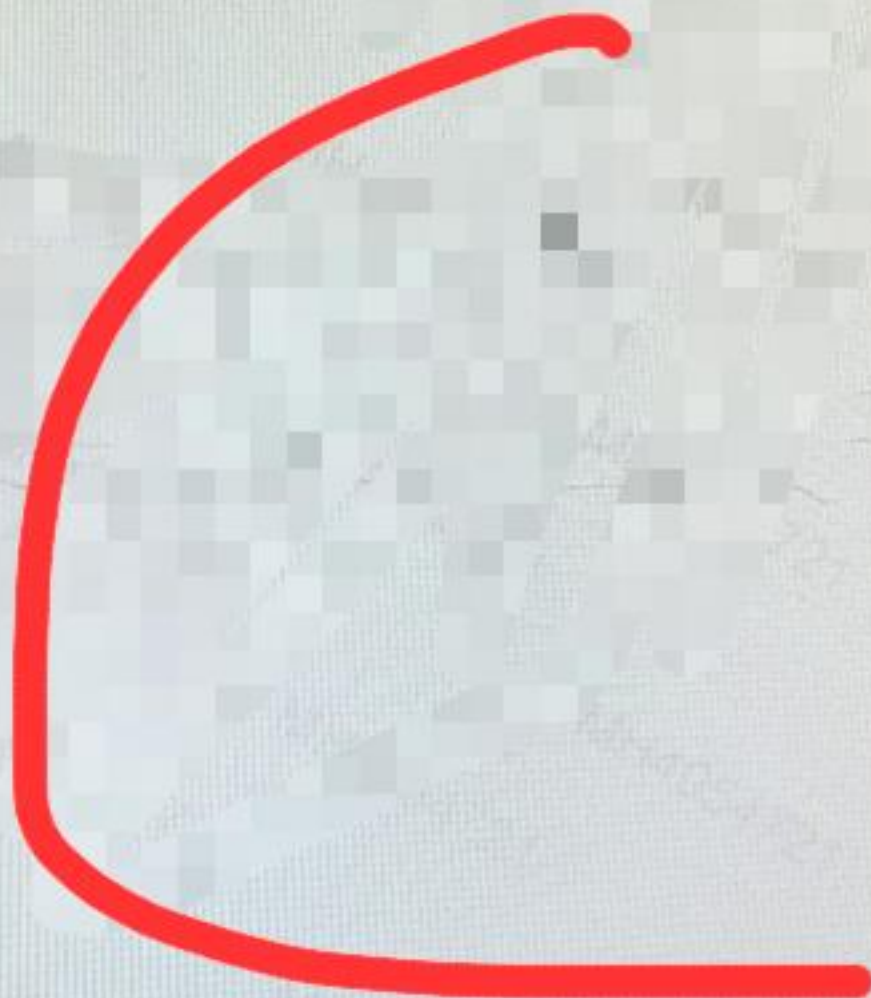
Question No. 22

If $f(x) = 5x^2 + 5x + 3$ and $g(x) = 3x^2 + 10x + 6$. Find $h(x) = f(x) - g(x)$.

- $h(x) = -2x^2 + 5x + 1$
- $h(x) = -2x^2 + 5x + 3$
- $h(x) = 2x^2 - 5x - 3$
- $h(x) = 2x^2 - 5x + 1$

Which is the equation for this graph?

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

Question No. 25

A function $f(x)$ is one-to-one if

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

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

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

Solve $11 - 7x < 39$

○ $x < -4$

○ $x > -4$

○ $x < 4$

○ $x > 4$

Question No. 3

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

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

Question No. 5

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

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

Next رالی

The solution set of $x^2 - 3x - 6$ is

$\{3 \pm \sqrt{15}\}$

$\left\{ \dfrac{3 \pm \sqrt{3}}{2} \right\}$

$\{3 \pm \sqrt{3}\}$

$\left\{ \dfrac{3 \pm \sqrt{15}}{2} \right\}$

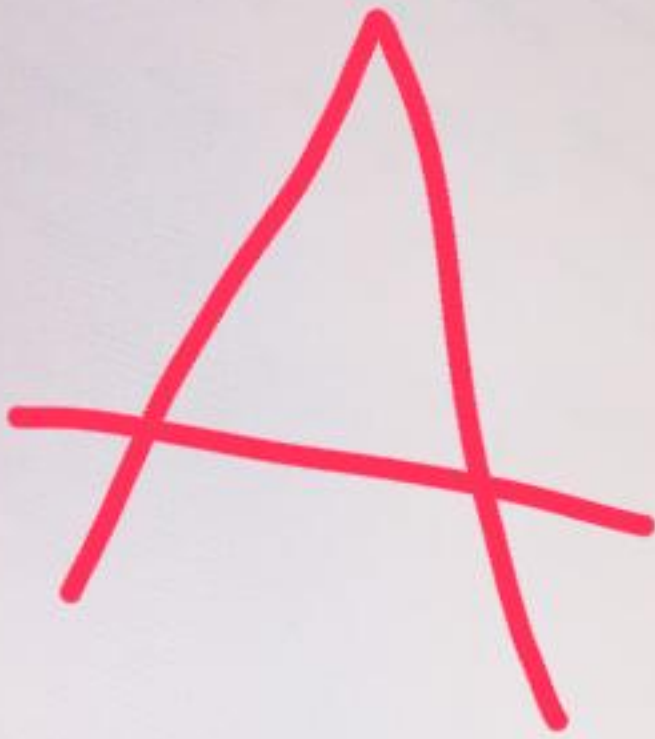Let $f(x)$ be a one-to-one function, then $g(x)$ is the inverse function of $f(x)$ if

- $(fog)(x) = x$ only
- $(fog)(x) \neq x$ only
- $(fog)(x) = x$ and $(gof)(x) = x$
- $(fog)(x) \neq x$ and $(gof)(x) \neq x$

Question No. 1

The roots of $x^2 = -3x - 6$ are

- $\dfrac{-3 \pm \sqrt{15}}{2}$

- $\dfrac{-3 \pm i\sqrt{15}}{2}$

- $\dfrac{3 \pm i\sqrt{15}}{2}$
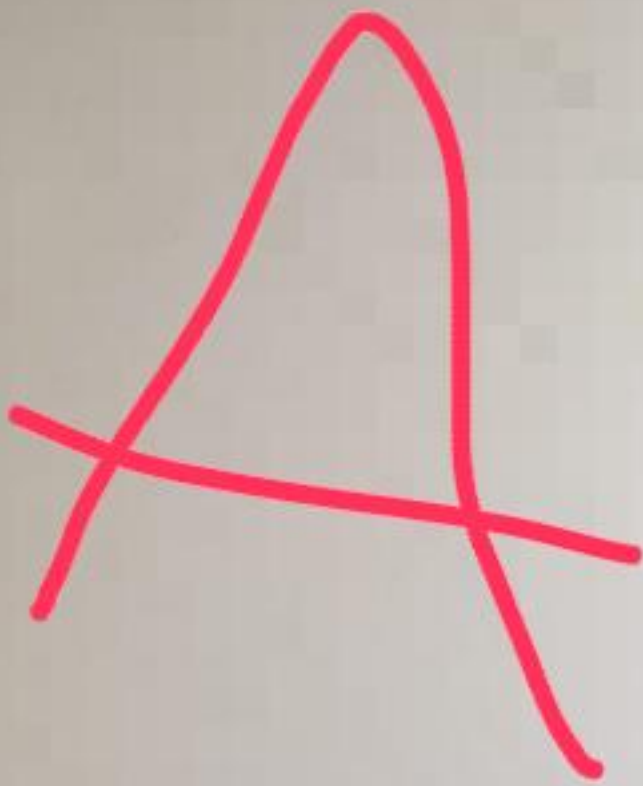
- $\dfrac{-3 \pm \sqrt{33}}{2}$

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Question No. 7

Solve $6n - 4 \geq 2n + 16$

- $[5, \infty)$
- $[3, \infty)$
- $(5, \infty)$
- $(3, \infty)$

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

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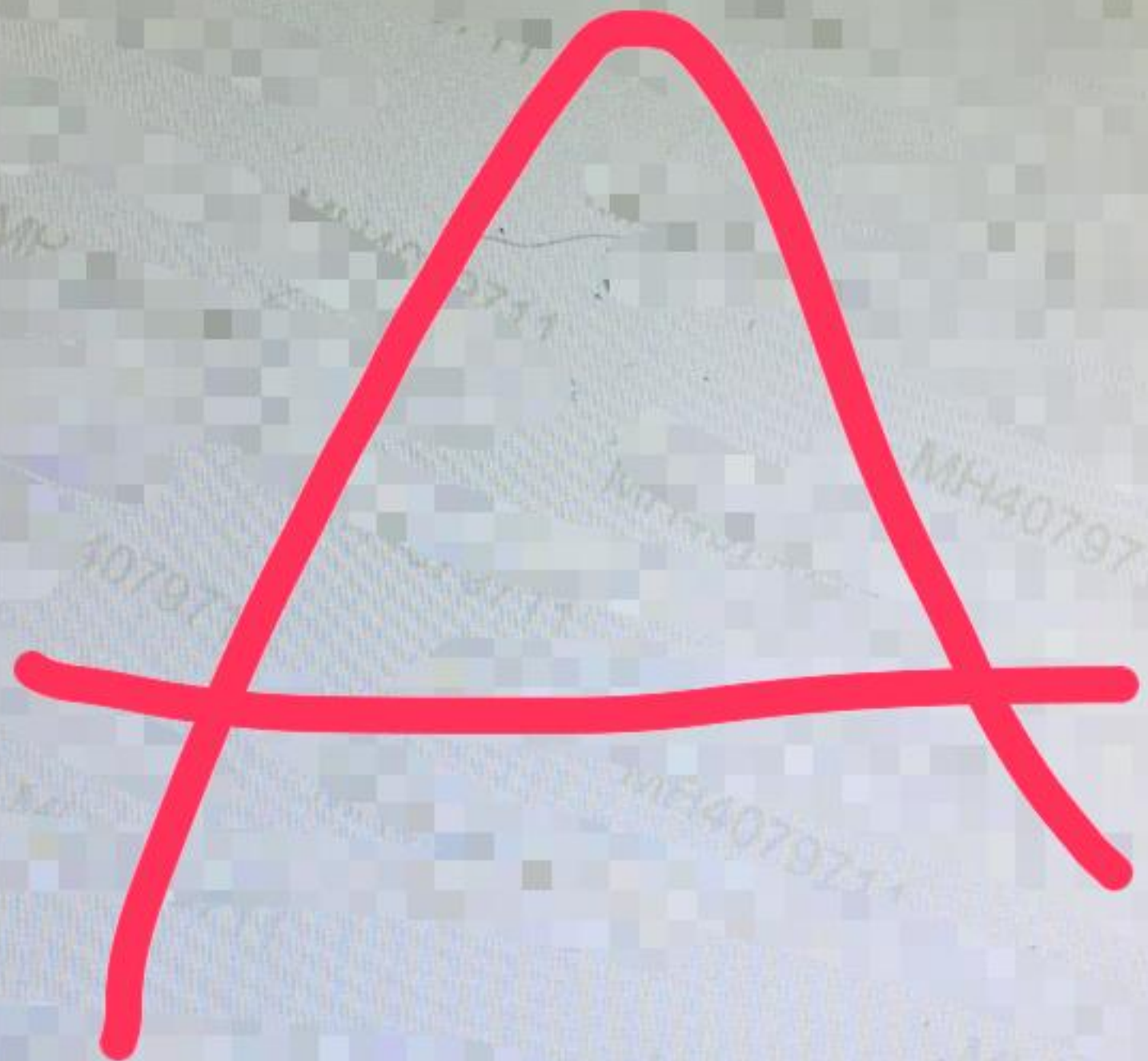- $a^2 + 2a - 1$
- $a^6 - 2a^3 + 1$

Save & Next

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The Solution set of $|4 + 8x| > -20$ is

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

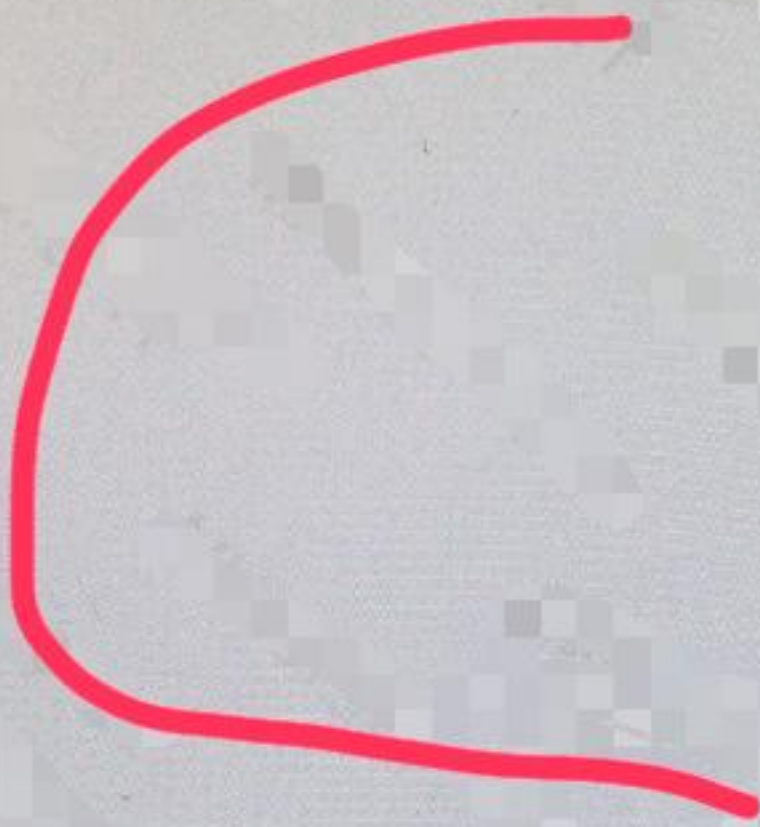The graph of $f(x) = x^2 - 6x + 9$ has

- ○ One x-intercept
- ○ Two x-intercepts
- ○ No x-intercept
- ○ Nine x-intercepts

Question No. 25

Solve $-2 < 4-x < 7$

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

Question No. 10

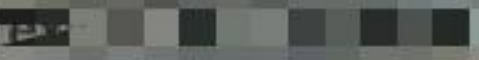Which of the following functions is not one-to-one

- $f(x) = x$
- $f(x) = -2x + 5$
- $f(x) = \sqrt{81 - x^2}$
- $f(x) = 8 + 16x$

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

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

Question No. 10

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

- ⦿ $a = 2$
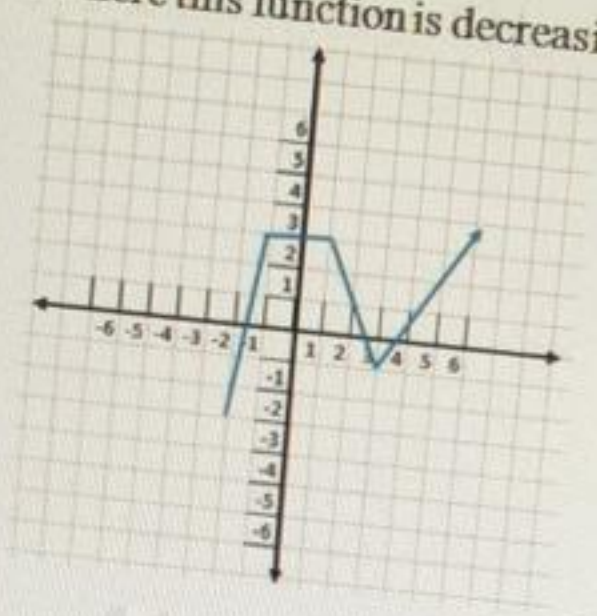- ○ $a = -3$
- ○ $a = 1$
- ○ $a = 3$

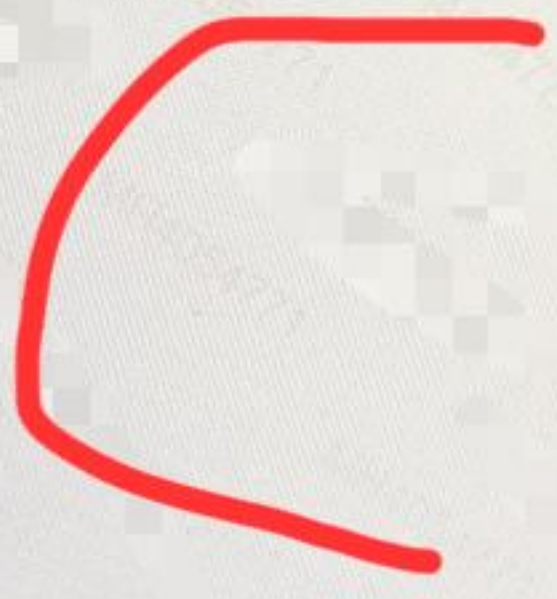If a function $f(x)$ has an inverse function and $f(-2) = 11$, then

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

Question No. 18

Identify the intervals where this function is decreasing.

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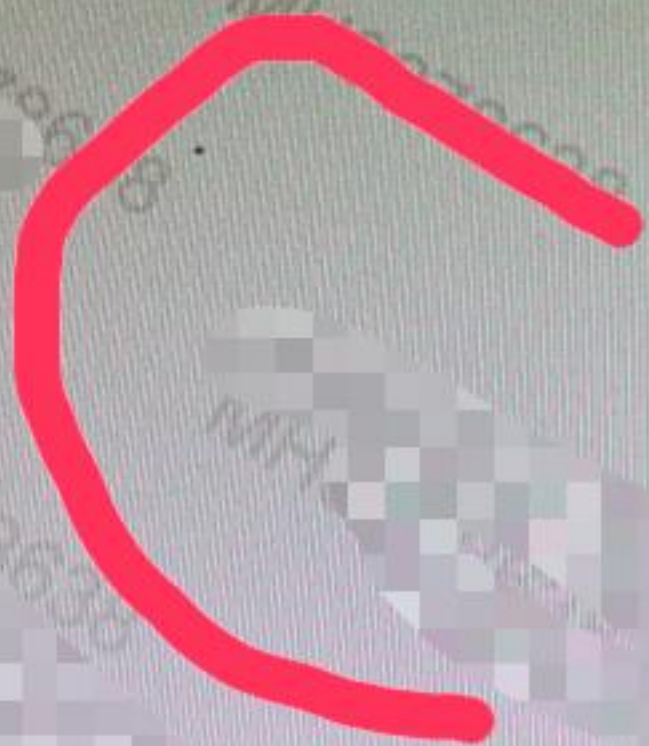- $(-1, 1)$
- $(1, 3)$
- $(3, \infty) \cup (-2, -1)$

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Question No. 16

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

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

Which of the following is a pair of inverse functions?

- $f(x) = x$, where $x \in \mathbb{R}$, and $g(x) = -x$, where $x \in \mathbb{R}$.
- $f(x) = 2x - 1$, where $x \in \mathbb{R}$, and $g(x) = x + \frac{1}{2}$, where $x \in \mathbb{R}$.
- $f(x) = \sqrt{3 + x}$, where $x \in [-3, \infty)$, and $g(x) = x^2 - 3$, where $x \in [0, \infty)$.
- $f(x) = \sqrt{3 + x}$, where $x \in [-3, \infty)$, and $g(x) = x^2 + 3$, where $x \in [0, \infty)$.
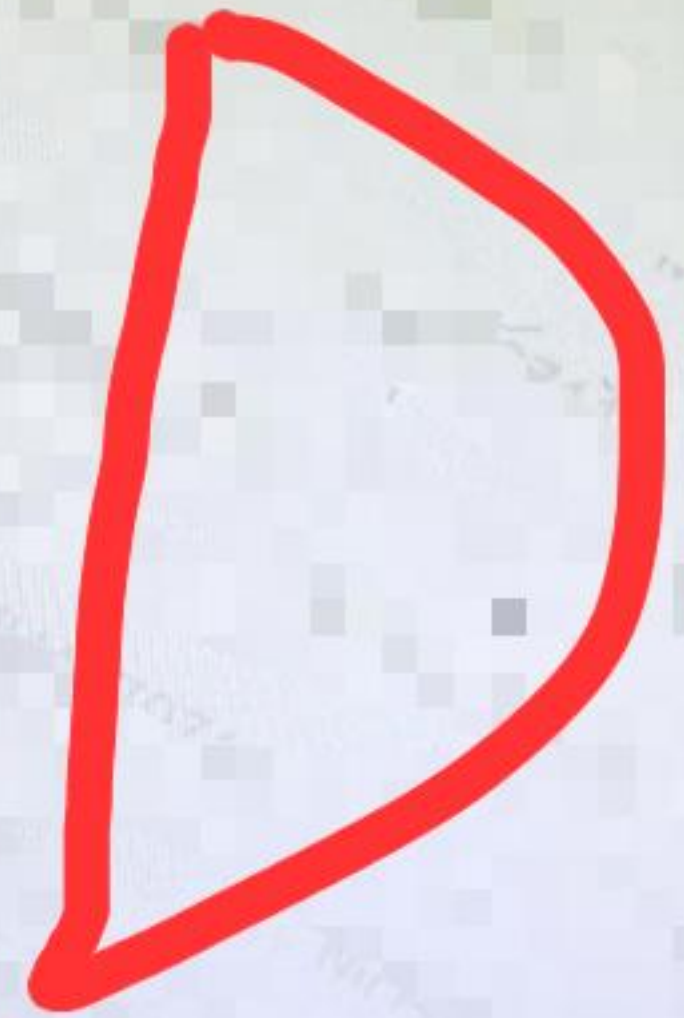
Let f be the one-to-one function defined by this set of ordered pairs $\{(-3,2), (4,5),(7,4),(10,19)\}$.
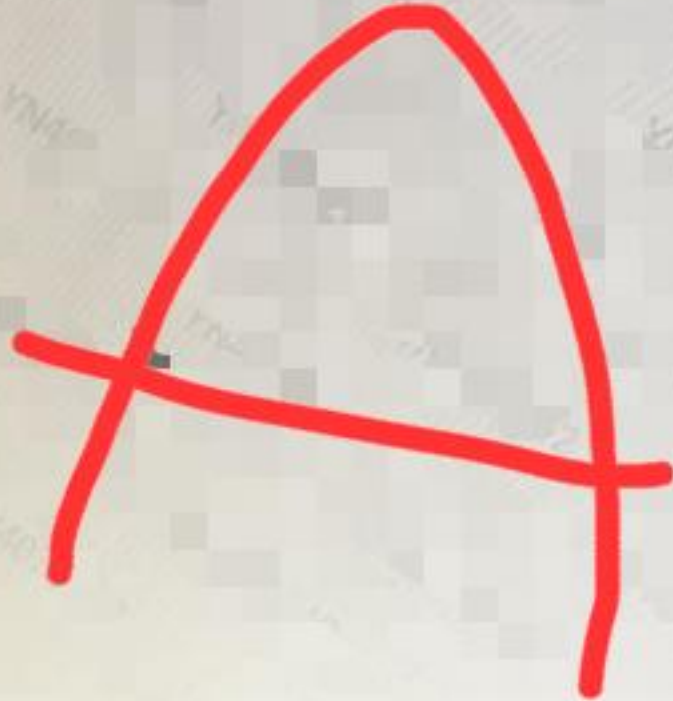Then $f^{-1}(5) =$

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

Find $f(x) - g(x)$, if $f(x) = \frac{8x-5}{4}$, $g(x) = \frac{1}{x}$.

- $\dfrac{8x^2 - 5x - 4}{4x}$
- $\dfrac{8x^2 - 5x + 4}{4x}$
- $\dfrac{8x - 5}{4 - x}$
- $\dfrac{8x^2 - 5x - 1}{4x}$

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Give the domain of the function $f(x) = \dfrac{x^2 + 2x - 1}{\sqrt{4 - |2x + 4|}}$.

- $(-\infty, 0)$
- $(-4, 0)$
- $(0, 4)$
- $\mathbb{R}$

Solve this rational inequality

$$\frac{x+27}{x+3} < 7$$

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