تجميعات رياضيات الكويز الأول

وبالتوفيق للجميع ✡

Simplify: $\sqrt[8]{(x-7)^8}$

- $|x-7|$
- $(x-7)$
- $|x-7|^8$
- $(7-x)$

Question No. 6

Perform the indicated operations and Simplify. $\frac{a-b}{b-a} \div \frac{a^2+2ab+b^2}{a^2+ab}$

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

$$\frac{a-b}{-(a-b)} \times \frac{a(a+b)}{(a+b)^2}$$

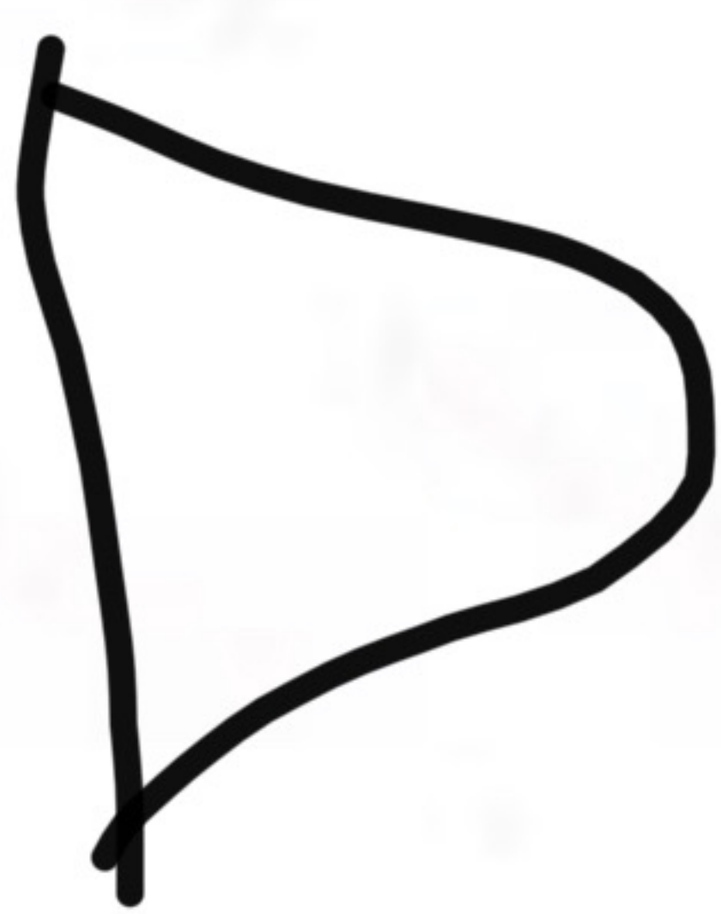
$$= \frac{a}{(a+b)}$$

B

Question No. 8

If A={1,2,3} and B={0, 1,2,3} then

- $A = B$
- A and B are disjoints sets
- $B \subseteq A$
- $A \subseteq B$



Question No. 21

Which one of the following equations is an identity?

- $3(5x-3)=15x+19$
- $-2(x+6)+3x=x-12$
- $x^2-1=0$
- $\frac{5}{3}x-\frac{4}{3}=11$

B

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Question No. 20

Which one of the following equations is a conditional linear equation?

- $\frac{5}{3}x - \frac{4}{3} = 11$
- $-2(x+6) + 3x = x - 12$
- $x^2 - 1 = 0$
- $3(5x - 3) = 15x + 19$

Question No. 2

If a, b and c are real numbers with a = b, then

- a + c = - (b + c)
- a + c = b + c
- a + c < b + c
- a + c > b + c

B

Question No. 25

The equation $-2x^2 + 13x - 15 = 0$ has

- two irrational roots
- one repeated root
- two nonreal complex roots
- two rational roots

D

Question No. 12

Using set notation, write the elements belonging to the set
{x | x is a natural odd number between 2 and 14}.

- {3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13}.
- {3, 5, 7, 9, 11, 13}.
- {1, 3, 5, 7, 9, 11, 13}.
- {4, 6, 8, 10, 12}.

B

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Total questions in exam: **25** | Answered: **3**

Question No. 14

The domain of $\frac{x+1}{(x+3)(2x-3)}$ is

- $R \setminus \{-3, \frac{3}{2}\}$
- $R \setminus \{3, \frac{-3}{2}\}$
- $R \setminus \{-3, 3\}$
- $R \setminus \{-3\}$

Total questions in exam: **25** | Answered: **0**

Question No. 21

Using set notation, write the elements belonging to the set

$$\{x \mid x = n^3, n \text{ is a natural number less than or equal to } 4\}.$$

- {1, 8, 27}.
- {1, 2, 3, 4}.
- {1, 2, 3}.
- {1, 8, 27, 64}.

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Total questions in exam: **25** | Answered: **21**

Question No. 17

The domain of the function $\frac{3x+2}{2x^2+7x-4}$ is

- $\mathbb{R} \setminus \{-\frac{1}{2}, 4\}$
- $\mathbb{R} \setminus \{\frac{1}{2}, -4\}$
- $\mathbb{R} \setminus \{1, 4\}$
- $\mathbb{R} \setminus \{-\frac{1}{2}, -4\}$

Question No: 4

Suppose $r \in \mathbb{R}; r \neq 0$. Factor out the least power of r from $6r^{-2/3} - 5r^{-5/3}$

- $r^{-2/3}(6 - 5r)$
- $r^{-5/3}(6r - 5)$
- $r^{-5/3}(5r - 6)$
- $r^{-2/3}(6 - 5r^{-1})$

B

عند التعويض بالحاسبه بيطلع لك الجواب B و D لاكن هو طالب بالسؤال (اقل اس) فالجواب يكون B لانه r اسها 5/3-

Question No. 10

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

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

Question No. 9

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

- -1
- 2i
- 1
- -2i

Total questions in exam: **25** | Answered: **0**

Question No. 2

Solve $A = P(1 + nr)$ for r

- $r = \frac{A-P}{Pn}$
- $r = \frac{Pn}{A-P}$
- $r = \frac{A}{n}$
- $r = \frac{P-A}{Pn}$

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Total questions in exam: **25** | Answered: **0**

Question No. 2

Simplifying the power of i^{1235} gives

- -3i
- 3+i
- 1235
- -i

Total questions in exam: **25** | Answered: **0**

Question No. 3

Let $x \neq 0, y \neq 0$ and $x \neq -y$. Then $(x^{-1} + y^{-1})(x + y)^{-1}$ is equal to

- $x + y$
- xy
- $\frac{1}{xy}$
- $\frac{1}{x} + \frac{1}{y}$

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Total questions in exam: 25 | Answered: 3

Question No. 13

Which one of the following equations is not a linear equation?

- $x - 1 = 0$
- $\left(\frac{23}{4}\right)^2 x + 0.5(2x + 4) = -3x$
- $3x^3 - \frac{4}{3}x + 1 = 0$
- $0.02x - 0.002x = 0.50$

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Total questions in exam: **25** | Answered: **0**

Question No. 1

The exponent of $(2xy)^3$ is

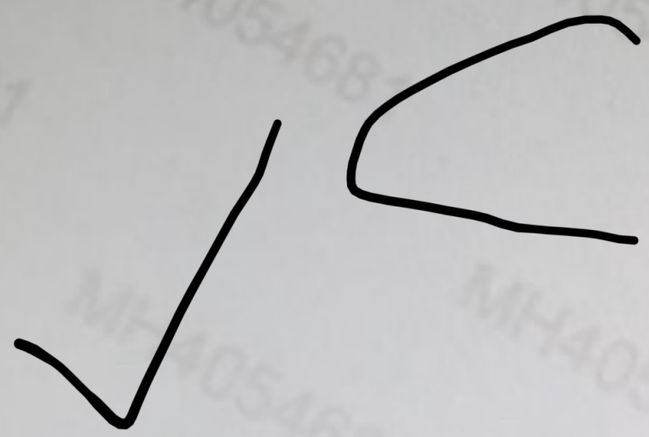
- 2xy
- 6
- 2
- 3

Total questions in exam: 25 | Answered: 0

Question No. 9

Let $x \in \mathbb{R}$ and $x > 4$. Simplify the expression $\sqrt{x - 4\sqrt{x} + 4}$

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



Question No. 25

Solving the equation 2(3x-4a)+4b=5x+4(b-a) for x gives

- $x = \frac{b-a}{3b+5a}$
- $x = -4a$
- $x = 4a$
- $x = \frac{2a}{4b}$

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Total questions in exam: 25 | Answered: 5

Question No. 1

Use the discriminate to determine the type of the solution for:

$$4x^2 = 6x - 7$$

- 2 irrational solutions
- 2 complex solutions
- 1 rational solution
- 2 rational solutions

B

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Question No. 11

The imaginary unit i equal to

- $-i$
- $-\sqrt{-1}$
- $(-1)^2$
- $\sqrt{-1}$

D

Total questions in exam: 25 | Answered: 8

Question No. 8

Simplify the expression $\sqrt{(x-10)^2}$

- $x-10$
- $|x+10|$
- $x+10$
- $|x-10|$

D

Question No. 10

The equation $x^2 + 225 = 0$ has

- 2 real solutions
- 2 imaginary solutions
- 1 real solution
- No solution

B

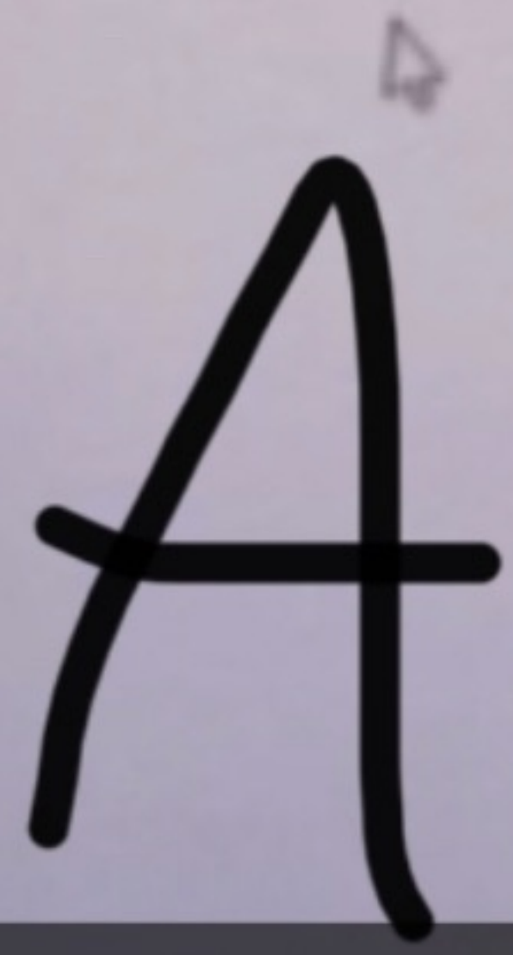
Total questions in exam: 25 | Answered: 12

Question No. 14

Use the quadratic formula to solve this equation:

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

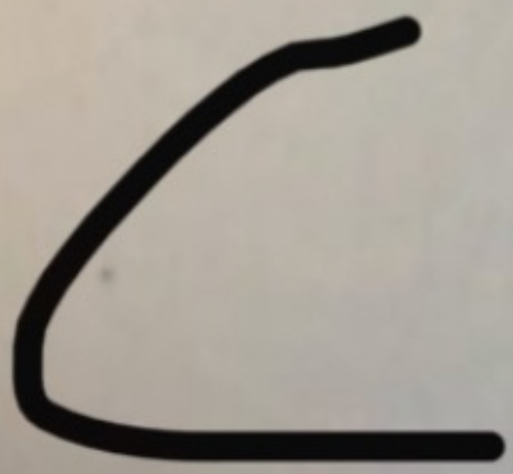
- $x = -2 \pm \sqrt{7}$
- $x = -2 \pm 2\sqrt{7}$
- $x = -1 \pm \sqrt{7}$
- $x = 2 \pm \sqrt{7}$



Question No. 8

Factor the polynomial $x^4 + 5x^2 - 36$ completely

- $(x^2 - 4)(x^2 + 9)$
- $(x + 2)(x^2 + 9)$
- $(x - 2)(x + 2)(x^2 + 9)$
- $(x - 2)(x + 2)(x + 3)(x - 3)$



الجواب A صحيح لاكن C اصح منه لانه لازم تفك المربع

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

Question No. 2

Factor: $6x^2 - x - 15$

- $(2x - 3)(3x - 5)$
- $(2x + 3)(3x - 5)$
- $(6x + 3)(x - 5)$
- $(6x - 3)(x + 5)$

B

Question No. 5

Q. 3 means that

a+a+a

3a

(3+3+3)a

a.a.a

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Total questions in exam: **25** | Answered: **14**

Question No. 23

Suppose x is a real number. Evaluate the expression $-3(x-1)^0$

- 3 if $x \neq 0$
- -3
- -3 if $x \neq 0$
- -3 if $x \neq 1$

Question No. 21

The degree of the quotient of the division $(7x^4 - 4x^3 + 6x - 5) \div (x + 2)$ equals:

- 6
- 4
- 5
- 3

D

Total questions in exam: **25** | Answered: **9**

Question No. 9

Suppose that $n \in \mathbb{N}$ and $n < 4$. The degree of the polynomial

$$(x^n y^4 - 2x^2 y + x^3 y).(y^n x^2 - 3x^n y + 5y^9) \text{ is}$$

- n + 13
- 13
- (n + 4)(n + 2)
- 12

A

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

Question No. 1

Perform this division $(6m^2+13m-15)\div(m+3)$

- $6m-5$
- $6m-5+\frac{4}{m-5}$
- $m-5$
- $6m+5$

Question No. 20

Perform the division $\dfrac{x^3y^3 - 3x^2y^2 + xy - 1}{xy - 3}$

- $\dfrac{x^3y^3 - 3x^2y^2 + xy - 1}{xy - 3} = x^2y^2 + 1 - \dfrac{2}{xy - 3}$
- $\dfrac{x^3y^3 - 3x^2y^2 + xy - 1}{xy - 3} = -x^2y^2 + 1 - \dfrac{2}{xy - 3}$
- $\dfrac{x^3y^3 - 3x^2y^2 + xy - 1}{xy - 3} = x^2y^2 - 1 + \dfrac{2}{xy - 3}$
- $\dfrac{x^3y^3 - 3x^2y^2 + xy - 1}{xy - 3} = x^2y^2 + 1 + \dfrac{2}{xy - 3}$

D

Dividing the polynomial $y^3 - 8$ by $2 - y$ gives

- $-y^2 - 2y - 4$
- $y^2 + 2y + 4$
- $y^2 - 2y + 4$
- $y^2 - 2y - 4$

A

Question No. 14

The simplified expression of $(-9)^{x/y}$ is positive if the values of x and y are equal to

- $x = 6,\ y = 2$
- $x = 2,\ y = 2$
- $x = 9,\ y = 3$
- $x = 8,\ y = 2$

D

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Total questions in exam: **25** | Answered: **0**

Question No. 1

The expression $8z^6 + 3z^5 + 4z$ can be classified as a

- none of these
- monomial
- trinomial
- binomial

Question No. 10

Dividing $-33x^8 - 9x^6 + 30x^4 - 21x^2$ by $-3x^2$ gives

- $11x^6 + 3x^4 - 11x^2 + 7$
- $11x^6 + 3x^4 - 11x^2 + 7x$
- $11x^6 + 3x^4 - 10x^2 + 7$
- $11x^6 + 3x^4 - 10x^2 - 7$

C

Question No. 7

The expression $x\,y\,z$ can be classified as a

- monomial
- binomial
- trinomial
- none of these

A

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Question No. 4

Select the correct property that describes the given equation.

11 + (−11) = 0

- Associative property of multiplication
- Commutative property of addition
- Inverse property of addition
- Identity property of addition

Question No. 4

Select the equation that illustrates the distributive property.

- $4 \times 1 = 4$
- $4 \times (6 + 7) = 4 \times 6 + 4 \times 7$
- $4 + 6 = 6 + 4$
- $4 + (6 + 7) = (4 + 6) + 7$

B

Total questions in exam: **25** | Answered: **3**

Question No. 1

Select the correct property that describes the given equation.

$x + (y + 3) = x + (3 + y)$

- Associative property of multiplication
- Commutative property of addition
- Identity property of addition
- Inverse property of addition

B

Question No. 8

The elements from $A = \{-8, -2, 0.5, \frac{10}{5}, \sqrt{25}, \sqrt{10}, \pi, 7\}$ that belong to the set of rational numbers are

- $\{-8, -2, 0.5, \frac{10}{5}, \sqrt{25}, \pi, 7\}$
- $\{-8, -2, 0.5, \frac{10}{5}, \sqrt{25}, \sqrt{10}, 7\}$
- $\{-8, -2, 0.5, \frac{10}{5}, \sqrt{25}, 7\}$
- $\{-8, -2, 0.5, \frac{10}{5}, \sqrt{25}\}$

Maths_Sem1_Qu

Total questions in exam: **25** | Answered: 11

Question No. 12

The set of irrational numbers from $\{-7, -\sqrt{5}, -2, -\frac{1}{6}, 0, 1, 2\frac{1}{3}, \sqrt{25}, \frac{17}{2}\}$ is

- $\{-\sqrt{5}, -\frac{1}{6}, 0, 2\frac{1}{3}, \sqrt{25}, \frac{17}{2}\}$
- $\{-\sqrt{5}, \sqrt{25}\}$
- $\{-7, -2\}$
- $\{-\sqrt{5}\}$

D

Question No. 19

Select the correct property that describes the given equation.

$15 \times (7 + 9) = 15 \times 7 + 15 \times 9$

- Distributive property
- Identity property of addition
- Commutative property of addition
- Inverse property of addition

A

Use set builder notation to represent the set A = {3, 6, 9, 12, 15, 18, 21, 24, 27, 30}

- $A = \{x \mid x \in \mathbb{N}\}$
- $A = \{x \mid x \in \mathbb{N}, x < 31\}$
- $A = \{x \mid x \in \mathbb{N}, 1 < x < 31\}$
- $A = \{x \mid x \in \mathbb{N}, 1 < x < 31, x = 3n, n \in \mathbb{N}\}$

D

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Total questions in exam: 25 | Answered: 11

Question No. 21

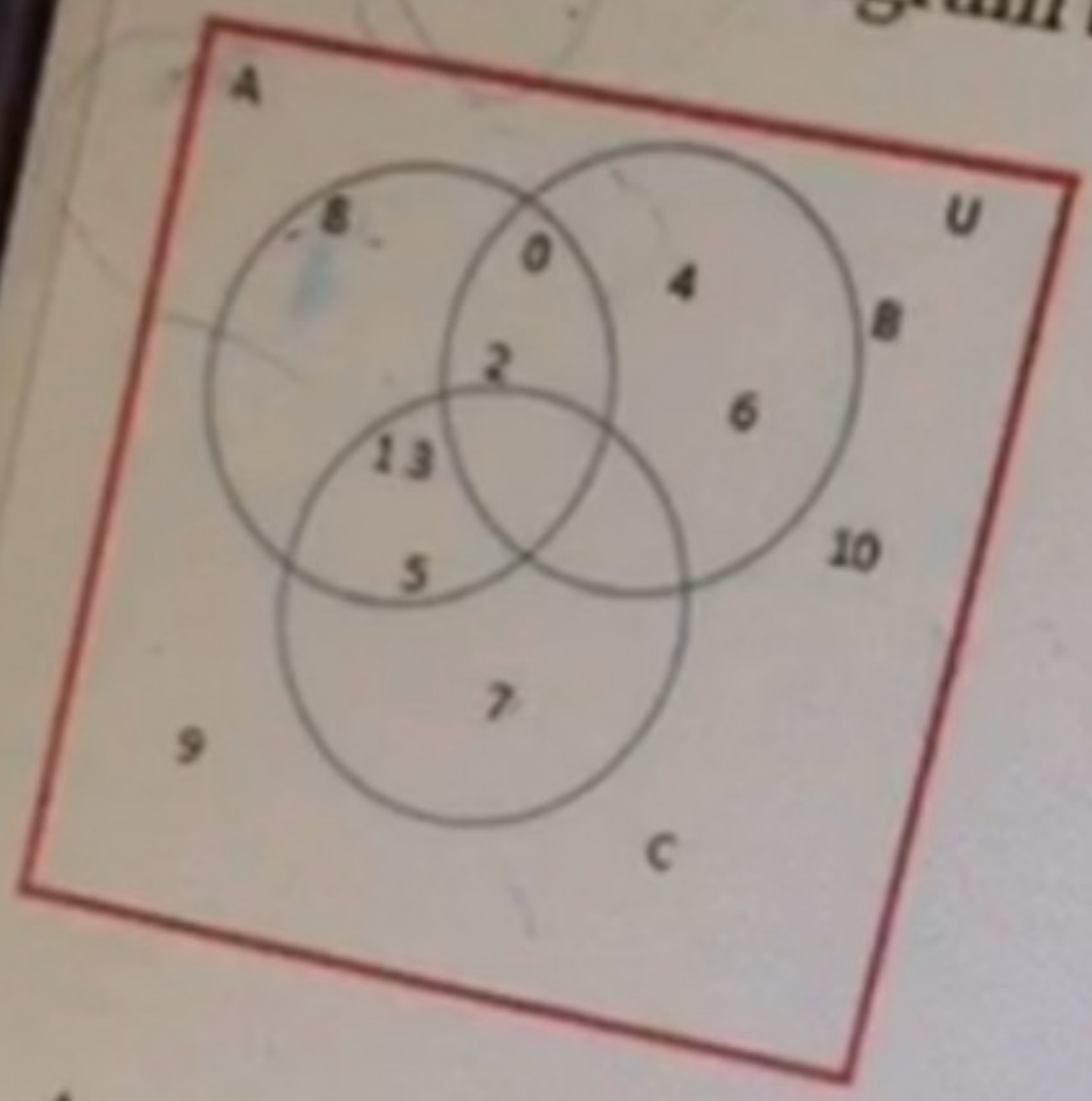
Select the correct property that describes the given equation.

$(8 \times 12) \times 3 = 8 \times (12 \times 3)$

- Associative property of multiplication
- Identity property of addition
- Inverse property of addition
- Commutative property of addition

A

Use the Venn diagram to determine $A \cap B'$.



- $A \cap B' = \{0, 2\}$
- $A \cap B' = \{0, 1, 2, 3, 5\}$
- $A \cap B' = \{1, 3, 5, 8\}$
- $A \cap B' = \{\}$

Question No. 2

The following expression [1,4,7] ∩ [4,5] is equivalent to

- [1,4,5,7]
- [1,4,6]
- ϕ
- {4}

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

Question No. 5

If U is a universal set then the complement of U is equal to

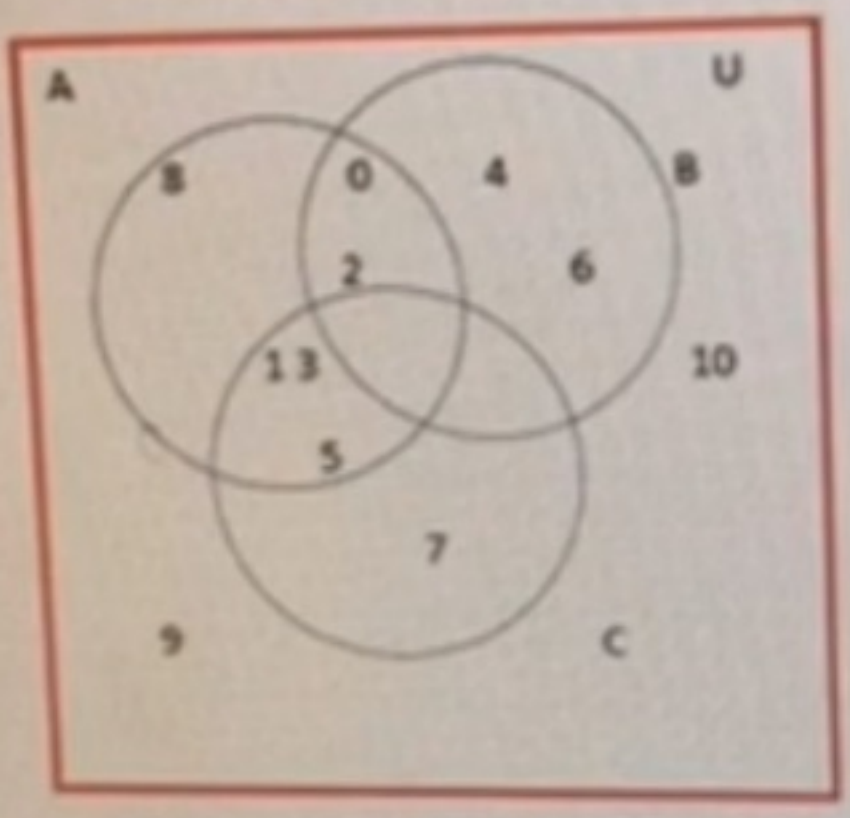
- $\emptyset$
- -1
- U
- 1

A

Total questions in exam: 25 | Answered: 6

Question No. 7

Use the Venn diagram to determine U



- U = {9, 10}
- U = {0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10}
- U = { }
- U = {0, 1, 2, 3, 4, 5, 6, 7, 8}

Question No. 10

The union {1, 2, 3, 5, 6, 7} ∪ {4, 5, 6, 10} is

- ∅
- {1, 2, 3, 4, 6, 7, 10}
- {5, 6}
- {1, 2, 3, 4, 5, 6, 7, 10}

D

Question No. 3

Given that $A = \{2,5\}$ and $B = \{7\}$ then

- $A \cap B = \{7\}$
- $B \subseteq A$
- A and B are disjointsets
- $A \cup B = \{2,5\}$

C

Question No. 10

Using set notation, the elements belonging to the set: {x| x is a natural number less than 2} are

- ∅
- {∅}
- {1}
- {0}

Question No. 8

Let $U = \{-2,-1,1,2,3,4\}$, $A = \{-1,2,4\}$ and $B = \{-2,-1,3\}$, then $A' \cap B =$

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

B

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Total questions in exam: **25** | Answered: **0**

Question No. 1

If A is any set then $A \cup \emptyset$ is equal to

- 1
- A
- Ø
- -1

B

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Total questions in exam: 25 | Answered: 11

Question No. 17

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

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

Question No. 11

The intersection $\{4, 6, 8, 10, 12, 14\} \cap \{4, 5, 6, 10\}$ gives

- $\{4, 6, 10\}$
- $\{4, 6, 8, 10, 12, 14\}$
- $\emptyset$
- $\{4, 6, 8, 10\}$

A

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Total questions in exam: 25 | Answered: 0

Question No. 12

Determine the following intersection $\emptyset \cap \{6,7\} =$

- $\emptyset$
- $\{6,7\}$
- $\{7\}$
- $\{6\}$

Question No. 24

If A=(1,2,3,4,5,6) then

- $\{1,4\} \subseteq A$
- $1 \notin A$
- $\{0,1\} \subseteq A$
- $\{1\} \in A$

Let $U = \{-3, -2, -1, 0, 1, 2, 3, 4, 5, 6\}$, $A = \{-2, 0, 2, 4, 6\}$, and $B = \{0, 1, 2, 3, 4, 5, 6\}$.
Find $(A \cap B)'$.

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