تجميعات " ريفان و ود "

دعواتكم 🙏💛💛 .

MATH

2020

الميد الأول

Question No. 5

The equation $2x^2 - x + c = -1$ has two non-real complex solutions for x, if

- $c < -\frac{7}{8}$
- $c > -\frac{7}{8}$
- c is any real number
- $c > -\frac{7}{8}$

$$C > \frac{-7}{8}$$

Simplify $\dfrac{x^2 x y^{-\frac{5}{2}}}{\left(x^{\frac{1}{2}} x y^{-1}\right)^2}$

- $x \cdot y^{\frac{1}{2}}$
- $x^{\frac{1}{2}} y^{\frac{1}{2}}$
- $x^{\frac{1}{2}} \cdot y^{-\frac{3}{2}}$
- $y \cdot x^{\frac{1}{2}}$

The solution set of $x^2 - 6\bar{x} = -5$ is

- $(-1, -5)$
- $(1, -5)$
- $(1, 5)$
- $(-1, 5)$

The solution set of the equation $5z^2 = a^2$, for z, is

- $\{\frac{a}{2}, -\frac{a}{4} + \frac{a\sqrt{3}}{4}i, -\frac{a}{4} - \frac{a\sqrt{3}}{4}i\}$
- ϕ
- $\{\frac{a}{2}, -\frac{a}{4} + \frac{\sqrt{3}a}{4}i, -\frac{a}{2} - \frac{a\sqrt{3}}{4}i\}$
- $\{\frac{a}{2}\}$

Save & Next

Question No. 6

The solution set of $4x^2 + 16x = 0$ is

Time Remaining
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Question No. 8

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

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

Save & Next

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

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

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

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

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

Question No -

Simplify and write in the standard form of a complex number

$$\sqrt{-36} + \sqrt{25}$$

- $i\sqrt{11}$
- $5 - 6i$
- $5 - 36i$
- $5 + 6i$

Save & Next

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

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Solving the equation $x^2 + ax - 1 = x$, for x, gives

- $\left\{ \dfrac{a-1 \pm \sqrt{a^2 - 2a - 3}}{2} \right\}$
- $\left\{ \dfrac{1-a \pm \sqrt{a^2 - 2a + 5}}{2} \right\}$
- $\left\{ \dfrac{1-a \pm \sqrt{a^2 - 2a - 3}}{2} \right\}$
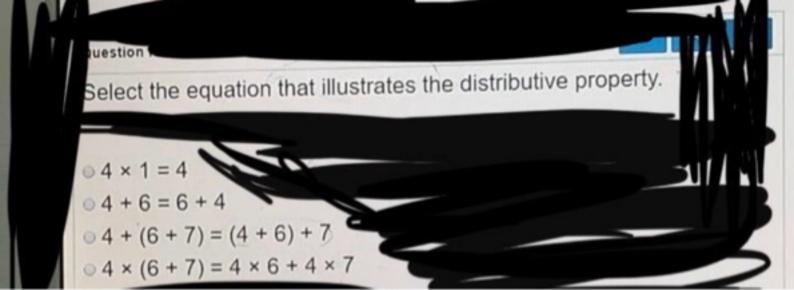- $\left\{ \dfrac{a-1 \pm \sqrt{a^2 - 2a + 5}}{2} \right\}$

Save & [

Question No. 1

The equation $9x^2 - 6x = -1$ has

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

What is the degree of this polynomial: $2x^3 - 5x^4 - 10x + 9$

○ 4

○ 3

○ 2

○ 5

Which of the following is not a polynomial?

- $2x^3 - 7x^2 + 5x - 2$
- $x^5 + 5x^2 - x^{-1} + 1$
- $x^5 - x^3 + x^2 - x - \frac{-}{5}$
- $x^5 + 5x^3 - x + \sqrt{2}$

Select the equation that illustrates the distributive property.

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

Question No. 10

Factor the following: $a^2 + ab - ac - cb$

- $(a + b)(a + c)$
- $(a - b)(a - c)$
- $(a + b)(a - c)$
- $(a - b)(a + c)$

If one solution of $x^2 - 3x + c = 0$ is 2, then

- ○ $c = -3$
- ○ $c = 2$
- ○ $c = -2$
- ○ $c = 0$

Question No. 1

The equation $9x^2 - 6x = -1$ has

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

Total questions in exam: **25** | Answered: **24**

Question No. 21

Find this quotient $\dfrac{x^2-15x+56}{x^2-6x-7} \div \dfrac{x+3}{x^2-9}$

- $\dfrac{(x+3)(x+4)}{3}$

- $\dfrac{(x-8)(x-3)}{x+1}$

- $4(x+1)$

- $\dfrac{6x}{x+2}$

Save & Next

Find $\dfrac{1}{4y} + \dfrac{3}{2y} - \dfrac{2}{3y}$

○ $\dfrac{2}{12y}$

○ $\dfrac{2}{9y}$

○ $\dfrac{13}{12y}$

○ $\dfrac{11}{12y}$

stion No. 25

the equation $ax^2 - 6x + 9 = 0$ has one doubled (repeated) solution, then

$= 36$
$= -1$
$= -36$
$= 1$

Factor completely $49a^2b - b^3$

- $\circ$ $b(7a + b)(7a - b)$

- $\circ$ $(7a + b^2)(7a - b)$

- $\circ$ Prime, doesn't factor

- $\circ$ $b(7a - b)^2$

Question No. 21

Find this quotient $\frac{x^2-15x+56}{x^2-6x-7} \div \frac{x+3}{x^2-9}$

○ $\frac{(x+3)(x+4)}{3}$

○ $\frac{(x-8)(x-3)}{x+1}$

○ $4(x+1)$

○ $\frac{6x}{x+2}$

Save & Next

Factor: $4x^2 - y^2 - 6y - 9$

○ $(2x - y - 3)(2x + y + 3)$

○ $(4x - y + 3)(4x + y - 3)$

○ $(4x - y - 3)(4x + y + 3)$

○ $(2x - y + 3)(2x + y - 3)$

Question No. 25

The degree of the polynomial $(y^2 - 2)^3$ is

- 5
- 6
- 2
- 4

Perform the indicated operation $[(x-2y)+7][(x-2y)-7$

- $x^2-2xy+4y^2-49$

- $x^2+4xy+4y^2-49$

- $x^2-4xy+4y^2-49$

- $x^2-4xy-4y^2-49$

Factor $4m^2 - 12m + 9$

- $(2m + 3)^2$
- $(2m - 7)(2m - 9)$
- $(2m - 3)^2$
- $(2m - 3)(2m + 3)$

Save & Next

Question No. 3

$(5m+2)^2$

○ $25m^2 + 20m + 4$

○ $25m^2 + 4$

○ $5m^2 + 4$

○ $5m^2 + 20m + 4$

Write $z = 3\left(\dfrac{2+3i}{i}\right)$ in the standard form $z = a + bi$

- $z = 9{-}6i$
- $z = {-}9{-}6i$
- $z = 9{+}6i$
- $z = {-}9{+}6i$

Save & Next

Question No. 7

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

○ {0}

○ {Ø}

○ Ø

○ {1}

Save & Next

Factor $\qquad x^2 - 8x - 20$

- ○ $(x + 1)(x - 20)$
- ○ $(x + 2)(x - 10)$
- ○ $(x - 2)(x + 10)$
- ○ $(x + 2)(x + 10)$

Save & Next

Simplify the expression by rationalizing the denominator: $\dfrac{3}{2+\sqrt{7}}$

- ⊙ $4 - \sqrt{7}$
- ⊙ $2 - \sqrt{7}$
- ⊙ $-2 + \sqrt{7}$
- ⊙ $-4 + \sqrt{7}$

Save & Next

Question No. 20

Select the correct property that describes the given equation. $x + (y + 3) = x + (3 + y)$

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

Perform the indicated operation $(5x - 11y)(2x - 7y)$

- $10x^2 - 57xy - 77y^2$
- $5x^2 - 57xy + 77y^2$
- $10x^2 - 13xy + 77y^2$
- $10x^2 - 57xy + 77y^2$

Save & Next

Factor: $(3u + 5)^2 - 18(3u + 5) + 81$

○ $(3u + 4)^2$

○ $(3u + 4)(3u - 14)$

○ $(3u + 14)(3u - 4)$

○ $(3u - 4)^2$

Question No. 12

The solution set of the equation $6(x-2)=2-x$ is

- ○ {2}
- ○ 2
- ○ {2, -2}
- ○ ∅

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

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

Save & Next

Simplify and write in the standard form of a complex number

$$\frac{8i}{4+9i}$$

○ $-\frac{72}{97} + \frac{32}{97}i$

○ $-\frac{72}{65} - \frac{32}{65}i$

○ $\frac{72}{97} + \frac{32}{97}i$

○ $\frac{72}{65} - \frac{32}{65}i$

Save & Next

Simplify the expression: $-9y^0 + (-9y)^0, y \neq 0$

- ○ -2
- ○ 8
- ○ 0
- ○ -8

Save & Next

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

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

Save & Next

Question No. 13

Which one of the following equations is a contradiction?

- $3(5x - 3) = 15x + 19$
- $-2(x + 8) + 3x = x - 16$
- $5x - 4 = 11$
- $x^2 - 4 = 0$

Perform the indicated operation $\dfrac{(2a^{-1}b^2c^{-2})^2}{(3^{-1}b)(2^{-1}ac^{-2})^3}$

○ $\dfrac{24b^3c^2}{a^5}$

○ $\dfrac{96b^3c^2}{a^5}$

○ $\dfrac{96bc^2}{a^5}$

○ $\dfrac{24bc^2}{a^5}$

Save & Next

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

$x = 2, \; y = 2$

$x = 8, \; y = 2$

$x = 9, \; y = 3$

$x = 6, \; y = 2$

The base of $-5p^4$ is

- -5p
- 5
- 4
- p

Save & Next

Question No. 25

Simplify the expression: $13 + 8 \div 2(8 - 2^2)$

○ 29
○ 3
○ 33
○ 27

Save & Next

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

○ $\emptyset$

○ 1

○ A

○ -1

Save & Next

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

○ $\dfrac{a+b}{a}$

○ $\dfrac{-a+b}{a}$

○ $\dfrac{a}{a+b}$

○ $\dfrac{-a}{a+b}$

Save & Next

The solution set of $(x + 5)^2 + 10 = 5$ is

- $\{-5 \pm \sqrt{5}\}$
- $\{5 \pm \sqrt{5}\}$
- $\{\pm 5\sqrt{5}\}$
- no real solutions

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

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

Save & Next

Question No. 10

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

○ $\{\frac{1}{4}(1 \pm i\sqrt{31})\}$

○ $\{\frac{1}{3}(1 \pm i\sqrt{31})\}$

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

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

Save & Next

The solution set of the equation $\frac{1}{20}(2x + 5) = \frac{x+2}{5}$ is

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

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

Question No. ▸

Find this quotient $\dfrac{4m}{m^2-18m+80} \div \dfrac{9m^2+90m}{m^2-18m+80}$

- ○ $2(m+1)$
- ○ $\dfrac{6m^2}{m+3}$
- ● $\dfrac{5m}{m+4}$
- ○ $\dfrac{4}{9(m+10)}$

Question No. 5

The equation $2x^2 - x + c = -1$ has two non-real complex solutions for x, if

- $c < -\frac{7}{8}$
- $c > -\frac{7}{8}$
- c is any real number
- $c > -\frac{7}{8}$

$$C > -\frac{7}{8}$$