If \( f(x) = x^2 - x - 1 \), what is \( f(-4) \)?

Answer: ________________

Round 1 2 3 4 5

If \( f(x) = x^2 - x - 1 \), what is \( f(-4) \)?

Answer: ________________

Round 1 2 3 4 5
Define \( A&B = A^3 + B^2 - 1 \), where \( A, B < 0 \)

What value \( C \) satisfies the equation \((-3)\&C = 26\)?

Answer: ____________________  Answer: ____________________

Round 1 2 3 4 5  Round 1 2 3 4 5
Simplify: \(2x - 4[(x - 1)^2 - 8(5 - x) + 2]\)

Answer: ______________________

Round 1 2 3 4 5

Simplify: \(2x - 4[(x - 1)^2 - 8(5 - x) + 2]\)

Answer: ______________________

Round 1 2 3 4 5
Multiply: \((x - 4y)(x^2 - 4xy + 16y^2)\)

Answer: ________________

Round 1 2 3 4 5

Multiply: \((x - 4y)(x^2 - 4xy + 16y^2)\)

Answer: ________________

Round 1 2 3 4 5
Which is of the following expressions is the largest? Write the corresponding letter in the answer slot.

A) $9^{99}$
B) $99^9$
C) $9^{99}$
D) $9^9!$

Answer: ____________________

Round  1  2  3  4  5

Which is of the following expressions is the largest? Write the corresponding letter in the answer slot.

A) $9^{99}$
B) $99^9$
C) $9^{99}$
D) $9^9!$

Answer: ____________________

Round  1  2  3  4  5
If \( w^2 + v^2 = 133 \) and \( wv = -18 \), find the positive value of \( w - v \).

Answer: ________________________

Round 1 2 3 4 5

If \( w^2 + v^2 = 133 \) and \( wv = -18 \), find the positive value of \( w - v \).

Answer: ________________________

Round 1 2 3 4 5
What is the slope of a line that is perpendicular to $14x - 38y = 100$?

Answer: ________________________

Round 1 2 3 4 5

What is the slope of a line that is perpendicular to $14x - 38y = 100$?

Answer: ________________________

Round 1 2 3 4 5
Find $k$ if $2 - 4 \ln(3) = \ln(k)$

Answer: ________________

Round 1  2  3  4  5

Find $k$ if $2 - 4 \ln(3) = \ln(k)$

Answer: ________________

Round 1  2  3  4  5
If two real numbers differ by 9, what is their least possible product?

Answer: ________________

Round 1 2 3 4 5

If two real numbers differ by 9, what is their least possible product?

Answer: ________________

Round 1 2 3 4 5
Find the remainder when \(3x^5 - 2x^3 + x - 10\) is divided by \(2x - 1\).

Answer: ____________________

Round 1 2 3 4 5

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Find the remainder when \(3x^5 - 2x^3 + x - 10\) is divided by \(2x - 1\).

Answer: ____________________

Round 1 2 3 4 5
Let $A = \begin{bmatrix} -10 \\ 15 \\ 35 \end{bmatrix}$ and $B = \begin{bmatrix} 8 \\ -16 \\ -12 \end{bmatrix}$.

If $BA = \begin{bmatrix} a \\ c \\ d \end{bmatrix}$, what is $d - a$?

Answer: ________________

Round 1 2 3 4 5

Let $A = \begin{bmatrix} -10 \\ 15 \\ 35 \end{bmatrix}$ and $B = \begin{bmatrix} 8 \\ -16 \\ -12 \end{bmatrix}$.

If $BA = \begin{bmatrix} a \\ c \\ d \end{bmatrix}$, what is $d - a$?

Answer: ________________

Round 1 2 3 4 5
Find the simplest form of the fractional equivalent of 0.41666

Answer : _________________
Round  1  2  3  4  5

Find the simplest form of the fractional equivalent of 0.41666

Answer : _________________
Round  1  2  3  4  5
Find the sum of all \( x \) that satisfy the equation: 
\[ 9^{x-3} = 81^x \]

Answer: ________________

Round 1 2 3 4 5

Answer: ________________

Round 1 2 3 4 5
Simplify \((3 - 5i)(-1 - 3i)\)

Answer: ________________________

Round 1 2 3 4 5

Simplify \((3 - 5i)(-1 - 3i)\)

Answer: ________________________

Round 1 2 3 4 5
Find the greatest real solution to the equation $3x^8 + 5x^4 = 2$, in radical form.

Answer: ________________________

Round 1 2 3 4 5

Find the greatest real solution to the equation $3x^8 + 5x^4 = 2$, in radical form.

Answer: ________________________

Round 1 2 3 4 5
Find the sum of all $x$ so that $\begin{vmatrix} x & 2 & 3 \\ x^2 & 4 & 9 \\ 0 & 1 & 1 \end{vmatrix} = 0$.

Answer: ________________________

Round 1 2 3 4 5
If \( f(x) = \frac{3x-7}{2} \), what is \( f^{-1}(2) \)?

Answer: ____________________

Round 1  2  3  4  5

If \( f(x) = \frac{3x-7}{2} \), what is \( f^{-1}(2) \)?

Answer: ____________________

Round 1  2  3  4  5
If \((a, b)\) is the center of the graph of \(4x^2 - 3y^2 - 8x + 18y = 35\), find \(ab\).

**Answer:**  

Round 1 2 3 4 5

---

If \((a, b)\) is the center of the graph of \(4x^2 - 3y^2 - 8x + 18y = 35\), find \(ab\).

**Answer:**  

Round 1 2 3 4 5
Simplify:
\[ \log_2 8 + \log_3 27 + \cdots + \log_n n^3 + \cdots + \log 1000 \]

Answer: ________________________

Round 1 2 3 4 5

Simplify:
\[ \log_2 8 + \log_3 27 + \cdots + \log_n n^3 + \cdots + \log 1000 \]

Answer: ________________________

Round 1 2 3 4 5
If one solution of $2x^4 - x^3 - 2x + 1 = 0$ is $x = 1$, what is the sum of the remaining solutions?

Answer: ________________________

Round 1 2 3 4 5

If one solution of $2x^4 - x^3 - 2x + 1 = 0$ is $x = 1$, what is the sum of the remaining solutions?

Answer: ________________________

Round 1 2 3 4 5
Find \( d(-2) \) if \( d \) is a linear function so that 
\[ d(1) = -2 \quad \text{and} \quad d(3) = 6 \]

Answer: _________________

Round 1 2 3 4 5

Find \( d(-2) \) if \( d \) is a linear function so that 
\[ d(1) = -2 \quad \text{and} \quad d(3) = 6 \]

Answer: _________________

Round 1 2 3 4 5
Find the 100th term in the arithmetic sequence: 
17, 11, 5, −1 ...

Answer: ________________________

Round 1 2 3 4 5

Find the 100th term in the arithmetic sequence: 
17, 11, 5, −1 ...

Answer: ________________________

Round 1 2 3 4 5
Solve for $x$ if $\sqrt{11 - x} = \sqrt{-5x} + 1$.

Answer: ________________

Round 1 2 3 4 5

Solve for $x$ if $\sqrt{11 - x} = \sqrt{-5x} + 1$.

Answer: ________________

Round 1 2 3 4 5
Find the sum of the geometric series:

\[ 18 + 12 + 8 + \frac{16}{3} + \cdots \]

Answer: ________________________

Round 1 2 3 4 5

Find the sum of the geometric series:

\[ 18 + 12 + 8 + \frac{16}{3} + \cdots \]

Answer: ________________________

Round 1 2 3 4 5
The ratio of boys to girls in your new class is 5 : 2. The total number of students in the class is 28. How many boys are in the class?

Answer: ________________
Round  1  2  3  4  5

The ratio of boys to girls in your new class is 5 : 2. The total number of students in the class is 28. How many boys are in the class?

Answer: ________________
Round  1  2  3  4  5