

Find the minimum value of $f(x, y) = x^2 + y^2$ subject to the constraint $3y = 3 - 2x$.

(Round your answer to 4 decimal places)

Tries 0/3

Find the maximum value of the function $f(x, y) = 11x^{3/2}y$ subject to the constraint $x + y = 41$. Round your answer to the nearest integer.

Tries 0/3

Find the maximum value of the function $f(x, y) = 3x - 11y^2$ subject to the constraint $x^2 + 11y^2 = 9$.

Tries 0/3

Let $f(x, y) = \ln(4xy^2)$. Find the maximum value of the function subject to $3x^2 + 7y^2 = 4$.

(Please round your answers to 4 decimal places.)

Tries 0/3

Find the maximum value of $f(x, y) = x^2 + 3y^3$ subject to the constraint $4x^2 + y^2 = 49$.

Tries 0/3

The minimum value of $f(x, y) = x^2e^{y^2}$, subject to the constraint $7y^2 + 2x = 4$, occurs at the points:

(Write answer from the smallest y to the largest and round your answers to 2 decimal places).

$(x, y) = ($ $,$ $)$

Tries 0/3

$(x, y) = ($ $,$ $)$

Tries 0/3

Find the minimum and maximum of $f(x, y) = y^2 - x^2 - 4x$, restricted to $\frac{1}{25}x^2 + \frac{1}{9}y^2 = 1$, rounded to the nearest integer.

minimum:

Tries 0/3

maximum:

Tries 0/3

Let $f(x, y) = e^{-xy/4}$. Find the minimum and maximum values of the function $f(x, y)$ subject to the constraint $18x^2 + 19y^2 = 11$ rounded to 4 decimal places.

Exam 5 Practice Problems

min =

Tries 0/3

max =

Tries 0/3

There is an ant on a circular heated plate. The plate temperature is given by $f(x, y) = y^2 - x^2 + 15$ degrees Fahrenheit, with x and y in meters from the center of the plate. The ant walks along the edge of the plate, which has a radius of 3 meters and has its center at the origin. Given the ant prefers warmer spots to colder spots, what is the warmest the ant can get?

Tries 0/3

Alice has exactly 24 hours to study for an exam, and without preparation she will get 200 points out of 1000 points on the exam. It is estimated that her exam score will improve by $x(40 - x)$ points if she reads her lecture notes for x hours and $y(42 - y)$ points if she solves review problems for y hours, but due to fatigue she will lose $(x + y)^2$ points. What is the maximum exam score she can obtain? Round your answer to 2 decimal places.

Tries 0/3

A rectangular building with a square front is to be constructed of materials that costs 15 dollars per ft^2 for the flat roof, 11 dollars per ft^2 for the sides and the back, and 19 dollars per ft^2 for the glass front. We will ignore the bottom of the building. If the volume of the building is $5,600 \text{ ft}^3$, what dimensions will minimize the cost of materials? (Round your answers to the nearest hundredth such that the dimensions increase from the smallest to the largest.)

 ft by ft by ft

Tries 0/3

A rectangular box with a square base is to be constructed from material that costs $\$8\text{ft}^2$ for the bottom, $\$3\text{ft}^2$ for the top, and $\$7\text{ft}^2$ for the sides. Find the box of greatest volume that can be constructed for $\$196$. Round your answer to 2 decimals.

 ft^3

Tries 0/3

Suppose that a fruit stand exclusively sells apples and oranges. If the owner puts x apples and y oranges on the stand at the beginning of a day, it is estimated that he will make a profit of

$$p(x, y) = 7x^{\frac{3}{2}}y^{\frac{1}{2}} \text{ dollars/day.}$$

Suppose that he can only put 103 total pieces of fruit on the stand per day. What is the maximum profit that the owner can make each day? Round to the nearest hundred dollars.

Tries 0/3

Find the minimum cost of producing 100000 units of a product, where x is the number of units of labor, at $\$74$ per unit, and y is the number of units of capital expended, at $\$18$ per unit. And determine how many units of labor and

how many units of capital a company should use. Where the production level is given by...

$$P(x, y) = 100x^{0.6}y^{0.4}$$

(Round your first and second answers to 4 decimal places.)

$x =$ units of labor.

Tries 0/3

$y =$ units of capital.

Tries 0/3

(Round this third answer to 2 decimal places.)

Min cost = \$

Tries 0/3

A company's total profit from selling x thousand units of Product A and y thousand units of Product B is:

$$P(x, y) = 7.7x + 4.5y$$

measured in millions. The quantities produced must satisfy the production possibilities curve:

$$x^2 + y^2 = 144$$

Assuming a maximum exists, how many units of each product should the company produce so that their profit is maximized? (Round your answers to the nearest integer)

Units of A =

Units of B =

Tries 0/3

On a certain island, at any given time, there are R hundred rats and S hundred snakes. Their populations are related by the equation:

$$(R - 20)^2 + 16(S - 5)^2 = 68.$$

What is the maximum combined number of snakes and rats that could ever be on this island at the same time? (Round your answer to the nearest integer).

Tries 0/3

Evaluate the following double integral

$$\int_0^3 \int_0^{\sqrt{2}} 10xy \, dx \, dy.$$

(Round your answer to the nearest tenth)

Tries 0/3

Compute

$$\int_7^8 \int_0^y 3xy \, dx \, dy.$$

(Round your answer to 2 decimal places)

Tries 0/3

Compute

$$\int_{-4}^4 \int_0^4 (5x + 4y) \, dy \, dx.$$

(Round your answer to the nearest integer)

Tries 0/3

Evaluate

$$\int_{4\pi}^{5\pi} \int_0^y -11 \csc(y) \cos(x) \, dx \, dy$$

(Round your answer to 3 decimal places)

Tries 0/3

Evaluate

$$\int_2^3 \int_2^6 -2x^3 y^2 \, dy \, dx$$

(Round your answer to 1 decimal place)

Tries 0/3

Compute

$$\int_3^4 \int_3^x \frac{3x^2}{y^2} \, dy \, dx$$

(Round your answer to 2 decimal places)

Tries 0/3

Evaluate the double integral $\int_1^e \int_0^{4 \ln x} 5x \, dy \, dx$

Round your answer to three decimal places.

Tries 0/3

Compute $\int_0^{\sqrt{\pi/3}} \int_0^{x^2} -3x \cos y \, dy \, dx$

Tries 0/3

Evaluate the double integral

$$\int_0^{\pi/2} \int_0^1 5y^5 \cos(x) \, dy \, dx$$

Round your answer to three decimal places.

Tries 0/3

Evaluate

$$\int_0^{\pi} \int_0^y 5 \csc 4y \cos 4x \, dx \, dy.$$

(Round your answer to 3 decimal places)

Tries 0/3

Evaluate the following double integral

$$\iint_R 6x^3y \, dA$$

where R is the rectangle with vertices $(0, 0)$, $(2, 0)$, $(0, 4)$, and $(2, 4)$.

Volume =

\int

\int

$6x^3y$

Tries 0/3

Evaluate the integral (Round your answer to the nearest integer.):

Volume =

Tries 0/3

Switch the order of integration of the double integral:

$$\int_{-6}^0 \int_{x^2}^{36} f(x, y) \, dy \, dx$$

$$\int_{-6}^0 \int_{x^2}^{36} f(x, y) dy dx = \quad \boxed{} \quad \int \quad \boxed{} \quad f(x, y)$$

$\boxed{}$ $\boxed{}$

Tries 0/3

Evaluate the following double integral

$$\int_0^7 \int_{\sqrt{y}/4}^{\sqrt{y}} x \sqrt{49 - y^2} dx dy$$

(Round your answer to 3 decimal places)

Tries 0/3

The region G is bounded by the x -axis, $y = 4 \sin x$, $x = \frac{\pi}{6}$, and $x = \frac{\pi}{3}$. Evaluate the double integral

$$\iint_G 7 \sec^2 x dy dx$$

(Round your answer to 3 decimal places)

Tries 0/3

Evaluate

$$\int \int_R 4(x + y) dA$$

where the region R is bounded by $y = \frac{1}{8}x$, $x = 6$ and the x -axis.

(Round your answer to 3 decimal places)

Tries 0/3

Find the volume below $z = 2 + 4y$ above the region $-5 \leq x \leq 5$, $0 \leq y \leq 25 - x^2$.

(Round your answer to 3 decimal places)

Tries 0/3

Evaluate the integral:

$$\iint_R \frac{1}{x^2 + 8} dA,$$

where R is the region bounded by $y = 4x$, x -axis and $x = 2$.

Volume = \int

\int

$\frac{1}{x^2+8}$

Tries 0/3

Evaluate the integral (Round your answer to 3 decimal points.):

Volume =

Tries 0/3

Compute

$$\int_0^4 \int_{x^2}^{16} -6x\sqrt{1+y^2} dy dx$$

(Round your answer to 2 decimal places)

Tries 0/3

Compute

$$\int_0^{64} \int_{\sqrt{y}}^8 -6\sqrt{x^3+1} dx dy$$

(Round your answer to 2 decimal places)

Tries 0/3

Compute

$$\int_0^1 \int_{3y}^3 -6e^{x^2} dx dy$$

Tries 0/3

Evaluate $\iint -9x^2 dA$ over the region in the first quadrant bounded by the hyperbola $xy = 9$ and the lines $y = x$, $y = 0$, and $x = 6$.

(Round your answer to the nearest tenth)

Tries 0/3

Find the average value of

$$f(x, y) = 5e^y \sqrt{x + e^y}$$

on the rectangle with vertices $(0, 0)$, $(3, 0)$, $(3, 3)$, and $(0, 3)$.

Average Value \int =

f

Tries 0/3

Evaluate the integral (Round your answer to three decimal places.):

Average Value =

Tries 0/3

Find the volume under the surface $z = xy$ above the triangle with vertices $(3, 4, 0)$,

$(8, 4, 0)$, $(3, 9, 0)$. Volume = \int

f

Tries 0/3

(Round your answer to 3 decimal places)

Volume = *Tries 0/3*

A large building with a rectangular base has a curved roof whose height is

$$h(x, y) = 83 - 0.04x^2 + 0.028y^2$$

The rectangular base extends from $-50 \leq x \leq 50$ feet and $-100 \leq y \leq 100$ feet. Find the average height of the building, round your answers to the nearest 3 decimal places.

Tries 0/3

In a certain metropolitan area, the population is approximated by the function:

$$P(x, t) = \frac{7288e^{0.5t}}{1 + x}$$

where x is the number of miles from the center of the city, and t is the number of years after the year 2000. What is the average value of the population over the first 4 years within a radius of 5 miles from the city center?

Average population =

 \int *Tries 0/3*

Evaluate the integral (Round your answer to the nearest whole number.):

Average population = people*Tries 0/3*

Write the augmented matrix for the system of equations

$$\begin{array}{rclcrcl} 2x & + & 3y & - & 4z & = & 2 \\ & & - & y & + & z & = & -5 \\ 5x & + & 4y & + & 4z & = & 0 \end{array}$$

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Tries 0/3

Solve the given system using substitution and/or elimination. Classify each system as consistent independent, consistent dependent, or inconsistent.

$$\begin{cases} x + 29y = 15 \\ x = 3 \end{cases}$$

Only 2 Answer Tries for the first Submit button

- A. Inconsistent
- B. Consistent Independent
- C. Consistent Dependent

Tries 0/3

(Round your answers to 2 decimal places)

x =

Tries 0/3

y =

Tries 0/3

Solve the system of equations

$$\begin{aligned} 4x - 9y &= 204 \\ 9x - 4y &= 134 \end{aligned}$$

$(x, y) = ($ $;$ $)$

Tries 0/3

For the given matrix, perform the indicated row operation.

$$\begin{bmatrix} 1 & -9 & -6 & 5 \\ 3 & -6 & 4 & -6 \\ -5 & -8 & -8 & 1 \end{bmatrix}, \quad -3R_1 + R_2 \rightarrow R_2$$

Note: Partial credit is given for each correct column. A column will be colored green only if *ALL* entries in that column are correct. That is, some of the entries in a red column may be correct.

Tries 0/3

Solve the system of equations using the Elimination Method.

$$\begin{aligned} x - y + z &= -3 \\ -2x + 4y + 3z &= -49 \\ 5x + 4y - z &= -6 \end{aligned}$$

$$(x, y, z) = (\text{ } , \text{ } , \text{ })$$

Tries 0/3

One glasses of carrot juice and five glasses of milk contain 778 milligrams of vitamin A. One glass of carrot juice and one glass of milk contain 262 milligrams of vitamin A. How much vitamin A is in a glass of carrot juice?

Solve using Guassian Elimination.

mg

Tries 0/3

A goldsmith has two alloys of gold, the first having a purity of 97% and the second having a purity of 73%. If x grams of the first alloy are mixed with y grams of the second, obtaining 100 grams of an alloy which contains 85.96% gold, find x to the nearest gram.

Tries 0/3

Use Gaussian Elimination to solve the system of equations.

$$\begin{aligned} -2x + y &= -1 \\ -14x + 11y &= 5 \end{aligned}$$

$$(x, y) = (\text{ } , \text{ })$$

Tries 0/3

For the following problem, do **not** use the row switching row operation. Also, REMEMBER: For combining rows, the row operation is defined as "Replace a row with itself plus a nonzero multiple of another row".

$$\begin{aligned} -x + y + z &= -5 \\ 6x - 7y - z &= 89 \\ 4x - 4y - z &= 50 \end{aligned}$$

1. Enter the augmented matrix which corresponds to the system of equations given above.

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Tries 0/3

2. Using a single row operation, transform the (1,1) entry of the augmented matrix to 1 and enter the resulting matrix below. Use reduced fractions or exact decimals when appropriate.

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Tries 0/3

3. Specifically using a multiple of row 1, the result from part 2, perform two row operations: one row operation which reduces the (2,1) entry to zero and one row operation which reduces the (3,1) entry to zero. Enter the resulting matrix below. Use reduced fractions or exact decimals when appropriate.

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Tries 0/3

4. Continue using row operations to solve the system. Enter the solution of the system. Your final solution should be all integer values.

$x =$
 $y =$
 $z =$

Tries 0/3

Transform the given augmented matrix into row echelon form.

$$\left[\begin{array}{ccc|c} 3 & -6 & -9 & 0 \\ 2 & 0 & 10 & -4 \\ -1 & -1 & -12 & -12 \end{array} \right]$$

Note: Partial credit is given for each correct row. If the matrix is not in echelon form or has an incorrect number of rows of zeros, no credit will be given regardless of whether there are any correct rows.

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Tries 0/3

Use Gaussian Elimination to solve the system of equations.

$$\begin{aligned} 4x - 2y + 3z &= 32 \\ -4x - 5y - z &= 7 \\ 2x - 2y + 5z &= 28 \end{aligned}$$

$$(x, y, z) = (\text{ } , \text{ } , \text{ })$$

Tries 0/3

Given that 6 bison burgers and 2 medium orders of french fries from a restaurant contain a total of 1960 calories, and that 6 bison burgers and 1 medium order of french fries contain 1558 calories. How many calories does one bison burger contain?

(Round your answer to two decimal places.)

calories

How many calories does one medium order of french fries contain?

(Round your answer to two decimal places.)

calories

Tries 0/3

Solve the given system using matrices and Gaussian elimination. Classify each system as consistent independent, consistent dependent, or inconsistent.

$$\begin{cases} x - 6y - 5z = -2 \\ -3y + z = -3 \\ x + 3y - 8z = 7 \end{cases}$$

Note: Only 2 tries will be given for the classification.

- A. Consistent Independent
- B. Consistent Dependent
- C. Inconsistent

Tries 0/2

If the system is consistent dependent, let t be the free parameter and express the other variables in terms of t .

$x =$

$y =$

$z =$

Tries 0/3

Use Gaussian Elimination and matrices to solve the following problem.

An object is moving vertically where a is the constant acceleration, and for $t = 0$ that v is the initial velocity and h is the initial height. Given that at $t = 1$ second, $s = 34$ feet; at $t = 2$ seconds, $s = 70$ feet; and at $t = 3$ seconds, $s = 34$ feet. Find a function for the height, s , that is modeled using $s(t) = \frac{1}{2}at^2 + vt + h$.

$s(t) =$

Use the function to find the height of the object after 3.1 seconds.

(Round your answer to two decimal places.)

$s(3.1) =$ feet

Tries 0/3

Solve the system of equations using Gauss-Jordan elimination

$$4x - 3y = -12$$

$$5x - 3y = -18$$

$(x, y) = ($,

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Tries 0/3

Consider the following system of equations.

$$\begin{cases} x - 4y = -6 \\ 3x - 15y = -27 \end{cases}$$

Transform the augmented matrix corresponding to this system of equations into row echelon form.

Tries 0/3

Transform the row echelon matrix above into reduced row echelon form.

Tries 0/3

Determine the row operations used to transform the following row echelon matrix into **reduced** row echelon form.

NOTE: ONLY 3 ANSWER TRIES ON THIS PROBLEM.

$$\left[\begin{array}{ccc|c} 1 & -4 & -4 & 6 \\ 0 & 1 & 5 & -4 \\ 0 & 0 & 1 & 6 \end{array} \right] \longrightarrow \left[\begin{array}{ccc|c} 1 & 0 & 16 & -10 \\ 0 & 1 & 5 & -4 \\ 0 & 0 & 1 & 6 \end{array} \right]$$

- A. $-4R_2 - R_1 \rightarrow R_1$
- B. $-4R_1 + R_2 \rightarrow R_2$
- C. $R_2 + 4R_1 \rightarrow R_1$
- D. $-4R_1 - R_2 \rightarrow R_2$
- E. $4R_2 + R_1 \rightarrow R_1$
- F. $-4R_2 + R_1 \rightarrow R_1$

$$\left[\begin{array}{ccc|c} 1 & 0 & 16 & -10 \\ 0 & 1 & 5 & -4 \\ 0 & 0 & 1 & 6 \end{array} \right] \longrightarrow \left[\begin{array}{ccc|c} 1 & 0 & 16 & -10 \\ 0 & 1 & 0 & -34 \\ 0 & 0 & 1 & 6 \end{array} \right]$$

- A. $5R_2 + R_3 \rightarrow R_3$
- B. $-5R_3 + R_2 \rightarrow R_2$
- C. $5R_3 + R_2 \rightarrow R_2$
- D. $R_3 + 16R_2 \rightarrow R_2$
- E. $5R_3 - R_2 \rightarrow R_2$
- F. $R_3 - 5R_2 \rightarrow R_2$

$$\left[\begin{array}{ccc|c} 1 & 0 & 16 & -10 \\ 0 & 1 & 0 & -34 \\ 0 & 0 & 1 & 6 \end{array} \right] \longrightarrow \left[\begin{array}{ccc|c} 1 & 0 & 0 & -106 \\ 0 & 1 & 0 & -34 \\ 0 & 0 & 1 & 6 \end{array} \right]$$

- A. $16R_1 - R_3 \rightarrow R_3$
- B. $-16R_3 - R_1 \rightarrow R_1$
- C. $R_3 - 16R_1 \rightarrow R_1$
- D. $16R_1 + R_3 \rightarrow R_3$
- E. $16R_3 + R_1 \rightarrow R_1$
- F. $-16R_3 + R_1 \rightarrow R_1$

Find the **reduced** row echelon form of the following augmented matrix:

$$\left[\begin{array}{ccc|c} 2 & 3 & 7 & -47 \\ 2 & 1 & 0 & -4 \\ -2 & 6 & 2 & 56 \end{array} \right]$$

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Tries 0/3

Transform the given augmented matrix into **reduced** row echelon form.

$$\left[\begin{array}{ccc|c} 1 & 3 & -4 & 5 \\ 4 & 14 & -12 & 10 \\ 2 & 8 & -1 & 0 \end{array} \right]$$

Note: Partial credit is given for each correct row. However, if the matrix is not in the correct echelon form no credit will be given regardless of whether there are any correct rows.

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Tries 0/3

Use Gauss-Jordan elimination to write the following augmented matrix in **reduced** row-echelon form:

$$\left[\begin{array}{ccc|c} 6 & 30 & 13 & 169 \\ 3 & 1 & 4 & -1 \\ 3 & 10 & 3 & 67 \end{array} \right]$$

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Tries 0/3

Put the augmented matrix corresponding to the system into **reduced** row echelon form.

$$\begin{cases} x + 3y + 4z = -5 \\ 4x + 14y + 12z = -10 \\ 2x + 8y + 7z = 0 \end{cases}$$

Note: Partial credit is given for each correct row. However, if the matrix is not in the correct echelon form no credit will be given regardless of whether there are any correct rows.

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Tries 0/3

Consider the following system of equations.

$$\begin{cases} -4x - 4y + 16z = -12 \\ 2x + 5y + 7z = 0 \\ x + 5y + 17z = 0 \end{cases}$$

Transform the augmented matrix corresponding to this system of equations into row echelon form.

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Tries 0/3

Transform the row echelon matrix above into reduced row echelon form.

Tries 0/3

Use Gauss-Jordan Elimination to solve the system of equations.

$$\begin{cases} x + y = 8 \\ 2x + 2y + 5z = 51 \\ 3x - 2y - 2z = -10 \end{cases}$$

$x =$

$y =$

$z =$

Tries 0/3

Use matrix operations to find the matrices $A + B$ and $A - B$. Let

$$A = \begin{bmatrix} 5 & -1 & 3 \\ -1 & 3 & 2 \\ -3 & -3 & 0 \end{bmatrix}, \quad B = \begin{bmatrix} 2 & 2 & 5 \\ -3 & 2 & 2 \\ 4 & -3 & 5 \end{bmatrix}.$$

Compute

$A + B =$

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Tries 0/3

$A - B =$

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Tries 0/3

Use matrix operations to find the matrices $3A$ and $3A - 2B$. Let

$$A = \begin{bmatrix} 5 & -1 \\ 3 & -1 \end{bmatrix}, \quad B = \begin{bmatrix} 3 & 2 \\ -3 & -3 \end{bmatrix}.$$

Compute

$3A =$

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Tries 0/3

$3A - 2B =$

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Tries 0/3

Use matrix operations to find the matrix AB . Let

$$A = \begin{bmatrix} -4 & -1 \\ 4 & -5 \\ 5 & -1 \end{bmatrix}, \quad B = \begin{bmatrix} 5 & 0 & 4 \\ -1 & 4 & -5 \end{bmatrix}.$$

Note: Partial credit is given for each correct column. A column will be colored green only if *ALL* entries in that column are correct. That is, some of the entries in a red column may be correct.

$$AB = \begin{matrix} & \text{\ }\square & \text{\ }\square & \text{\ }\square \\ \text{\ }\square & \text{\ }\square & \text{\ }\square & \text{\ }\square \\ \text{\ }\square & \text{\ }\square & \text{\ }\square & \text{\ }\square \end{matrix}$$

Tries 0/3

Find AB and BA

$$A = \begin{bmatrix} -8 & 5 \\ 8 & 3 \end{bmatrix}, \quad B = \begin{bmatrix} -3 & -6 \\ 8 & -5 \end{bmatrix}$$

$$AB = \begin{matrix} \square & \square \\ \square & \square \end{matrix}$$

Tries 0/3

$$BA = \begin{matrix} \square & \square \\ \square & \square \end{matrix}$$

Tries 0/3

Find A^2 .

$$A = \begin{bmatrix} 0.2 & 0.5 & 1 \\ 0.1 & 1 & 0.5 \\ 1 & 0.6 & 0.9 \end{bmatrix}$$

$$\begin{matrix} \square & \square & \square \\ \square & \square & \square \\ \square & \square & \square \end{matrix}$$

Tries 0/3

Use matrix operations to find the matrices $4A$ and $2A - 5B$. Let

$$A = \begin{bmatrix} -1 & -1 & -5 \\ 3 & -4 & -3 \\ 3 & 4 & -3 \end{bmatrix}, \quad B = \begin{bmatrix} -3 & 5 & -5 \\ -2 & 2 & -3 \\ 3 & 3 & 0 \end{bmatrix}.$$

Compute

$$4A = \begin{bmatrix} \boxed{} & \boxed{} & \boxed{} \\ \boxed{} & \boxed{} & \boxed{} \\ \boxed{} & \boxed{} & \boxed{} \end{bmatrix}$$

Tries 0/3

$$2A - 5B = \begin{bmatrix} \boxed{} & \boxed{} & \boxed{} \\ \boxed{} & \boxed{} & \boxed{} \\ \boxed{} & \boxed{} & \boxed{} \end{bmatrix}$$

Tries 0/3

Let $M = \begin{bmatrix} -6 & 5 \\ 3 & -4 \end{bmatrix}$. Compute

$$3M - M^2 = \begin{bmatrix} \boxed{} & \boxed{} \\ \boxed{} & \boxed{} \end{bmatrix}$$

Tries 0/3

Find A^2 .

$$A = \begin{bmatrix} 2 & 3 & 1 \\ 4 & -12 & 1 \\ 4 & 5 & 2 \end{bmatrix}.$$

Note: Partial credit is given for each correct column. A column will be colored green only if *ALL* entries in that column are correct. That is, some of the entries in a red column may be correct.

$$A^2 = \begin{bmatrix} \ \ \boxed{} & \ \ \boxed{} & \ \ \boxed{} \\ \ \ \boxed{} & \ \ \boxed{} & \ \ \boxed{} \\ \ \ \boxed{} & \ \ \boxed{} & \ \ \boxed{} \end{bmatrix}$$

Tries 0/3

Given the number of calories expended by people with different weights and using different ways of exercising for 20 minute time periods is

$$A = \begin{matrix} & \begin{matrix} 120lb & 150lb \end{matrix} \\ \begin{bmatrix} 107 & 128 \\ 100 & 153 \\ 63 & 73 \end{bmatrix} & \begin{matrix} \text{Bicycling} \\ \text{Jogging} \\ \text{Walking} \end{matrix} \end{matrix}$$

A 120-pound person and a 150-pound person both bicycle for 40 minutes, jog for 10 minutes, and walk for 60 minutes. Create a matrix for the time spent exercising, then multiply the matrices to find the number of calories expended by the 120-pound person and the 150-pound person.

Round your answers to 2 decimal places.

120lb: calories

Tries 0/3

150lb: calories

Tries 0/3

Find $A^2 + 4A$.

$$A = \begin{bmatrix} 0.2 & -0.1 & -0.7 \\ -0.1 & -0.4 & 0.9 \\ 0 & -0.6 & 0.3 \end{bmatrix}$$

Round your answers to 2 decimal places.

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Tries 0/3
