Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.1. **No.1.**

(1) Compute $C = \begin{pmatrix} -3 & -1 \\ -2 & 1 \end{pmatrix} \begin{pmatrix} 1 & -3 \\ 3 & 3 \end{pmatrix}$. How much is the sum of C's entries?

A) 10, B) 7, C) 8, D) 6, E) 9

(2) Compute the square of the Eucledian length of $\{2, 2, -1, 2\}^T$!

A) 9, B) 12, C) 10, D) 11, E) 13

(3) Suppose that a plane contains the point $\{2, 1, -1\}^T$ and its normal vector is $\{-1, -1, -2\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?

A) 3, B) 2, C) 1, D) 0, E) 4

(4) Suppose that the following equation holds: $\alpha \begin{pmatrix} -3 \\ 0 \end{pmatrix} + \beta \begin{pmatrix} -1 \\ 1 \end{pmatrix} = \begin{pmatrix} 8 \\ 1 \end{pmatrix}$. Compute $\alpha + \beta$!

A) -5, B) -6, C) -7, D) -2, E) -4

(5) Compute x, if the vectors $\{-1, x, 2, -1\}^T$ and $\{3, -3, -3, 3\}^T$ are orthogonal to each other!

A) -9, B) -3, C) -6, D) -4, E) -5

(6) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 1x + 5y \\ 2x + 5y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 12, B) 9, C) 10, D) 13, E) 8

(7) Compute the scalar product of $\{3, 3, 2, -1\}^T$ and $\{2, 2, 3, -1\}^T$!

A) 19, B) 17, C) 16, D) 14, E) 15

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.2. **No.2.**

(1) Suppose that a plane contains the point $\{-1,1,2\}^T$ and its normal vector is $\{3,1,-3\}^T$. Write down its equation in the form $Ax+By+Cz-D=0$. How much is $(A+B+C)/D$?

A) $-\frac{3}{8}$, B) $-\frac{1}{4}$, C) 0, D) $-\frac{1}{8}$, E) $-\frac{5}{8}$

(2) Suppose that the following equation holds: $\alpha \begin{pmatrix} 0 \\ 1 \end{pmatrix} + \beta \begin{pmatrix} 2 \\ -3 \end{pmatrix} = \begin{pmatrix} -6 \\ 7 \end{pmatrix}$. Compute $\alpha+\beta$!

A) -7, B) -5, C) -8, D) -6, E) -10

(3) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 5x+2y \\ 1x+3y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 10, B) 11, C) 7, D) 9, E) 8

(4) Compute $C = \begin{pmatrix} -3 & -3 \\ -1 & 2 \end{pmatrix} \begin{pmatrix} -2 & 2 \\ 1 & 2 \end{pmatrix}$. How much is the sum of C's entries?

A) -7, B) -6, C) -8, D) -3, E) -2

(5) Compute the scalar product of $\{3,-2,3,2\}^T$ and $\{3,3,-1,-2\}^T$!

A) -3, B) -5, C) -8, D) -6, E) -4

(6) Compute the square of the Eucledian length of $\{1,1,2,-3\}^T$!

A) 15, B) 11, C) 10, D) 12, E) 13

(7) Compute x, if the vectors $\{-1,x,2,3\}^T$ and $\{3,3,2,-3\}^T$ are orthogonal to each other!

A) $-\frac{4}{3}$, B) $\frac{5}{3}$, C) $\frac{8}{3}$, D) $-\frac{7}{3}$, E) $-\frac{1}{3}$

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.3. **No.3.**

(1) Suppose that a plane contains the point $\{3,3,3\}^T$ and its normal vector is $\{-1,-2,1\}^T$. Write down its equation in the form $Ax+By+Cz-D=0$. How much is $(A+B+C)/D$?

A) $-\frac{1}{3}$, B) 0, C) -1, D) $\frac{1}{3}$, E) $-\frac{2}{3}$

(2) Compute the square of the Eucledian length of $\{-2,2,-3,2\}^T$!

A) 21, B) 19, C) 17, D) 18, E) 16

(3) Compute $C=\begin{pmatrix} -2 & 3 \\ -1 & -3 \end{pmatrix}\begin{pmatrix} -1 & -3 \\ -3 & 2 \end{pmatrix}$. How much is the sum of C's entries?

A) 9, B) 7, C) 12, D) 8, E) 11

(4) Suppose that the following equation holds: $\alpha\begin{pmatrix} -1 \\ 0 \end{pmatrix}+\beta\begin{pmatrix} 3 \\ 3 \end{pmatrix}=\begin{pmatrix} 5 \\ 3 \end{pmatrix}$. Compute $\alpha+\beta$!

A) -1, B) -4, C) -3, D) -6, E) -5

(5) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right)=\begin{pmatrix} 4x+3y \\ 1x+3y \end{pmatrix}=A\begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 9, B) 11, C) 7, D) 6, E) 8

(6) Compute x, if the vectors $\{2,x,-1,-3\}^T$ and $\{2,2,-3,2\}^T$ are orthogonal to each other!

A) $-\frac{1}{2}$, B) $-\frac{11}{2}$, C) $-\frac{5}{2}$, D) $-\frac{7}{2}$, E) $-\frac{9}{2}$

(7) Compute the scalar product of $\{-3,2,3,1\}^T$ and $\{-3,3,-1,2\}^T$!

A) 14, B) 9, C) 11, D) 13, E) 10

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.4. **No.4.**

(1) Suppose that the following equation holds: $\alpha \begin{pmatrix} 0 \\ -1 \end{pmatrix} + \beta \begin{pmatrix} -2 \\ -3 \end{pmatrix} = \begin{pmatrix} -2 \\ 0 \end{pmatrix}$. Compute $\alpha + \beta$!

A) -3, B) -7, C) -6, D) -4, E) -2

(2) Suppose that a plane contains the point $\{-2, 2, -2\}^T$ and its normal vector is $\{2, 2, -3\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?

A) 0, B) $-\frac{1}{2}$, C) $\frac{1}{6}$, D) $-\frac{1}{3}$, E) $-\frac{1}{6}$

(3) Compute the square of the Eucledian length of $\{-3, -1, -2, 1\}^T$!

A) 11, B) 10, C) 12, D) 15, E) 13

(4) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 4x + 5y \\ 3x + 4y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 12, B) 16, C) 14, D) 11, E) 13

(5) Compute x, if the vectors $\{-2, x, -3, -1\}^T$ and $\{3, 2, 1, 1\}^T$ are orthogonal to each other!

A) 6, B) 2, C) 5, D) 4, E) 1

(6) Compute the scalar product of $\{-3, 3, 3, 3\}^T$ and $\{-2, -3, 1, -3\}^T$!

A) -12, B) -9, C) -14, D) -13, E) -11

(7) Compute $C = \begin{pmatrix} 2 & 2 \\ 1 & 2 \end{pmatrix} \begin{pmatrix} -1 & 2 \\ 3 & 2 \end{pmatrix}$. How much is the sum of C's entries?

A) 19, B) 23, C) 22, D) 21, E) 18

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.5. **No.5.**

(1) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 4x+2y \\ 3x+3y \end{pmatrix} = A\begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?
A) 12, B) 9, C) 7, D) 10, E) 8

(2) Compute x, if the vectors $\{1, x, 2, -3\}^T$ and $\{2, 1, -3, -2\}^T$ are orthogonal to each other!
A) -2, B) -4, C) -5, D) -6, E) -7

(3) Suppose that the following equation holds: $\alpha\begin{pmatrix} -3 \\ 0 \end{pmatrix} + \beta\begin{pmatrix} 3 \\ -1 \end{pmatrix} = \begin{pmatrix} 6 \\ -1 \end{pmatrix}$. Compute $\alpha + \beta$!
A) -3, B) -1, C) -4, D) -2, E) 0

(4) Compute $C = \begin{pmatrix} -3 & 2 \\ -3 & -2 \end{pmatrix}\begin{pmatrix} -3 & 3 \\ -1 & 3 \end{pmatrix}$. How much is the sum of C's entries?
A) -5, B) -2, C) 0, D) -4, E) -1

(5) Compute the square of the Eucledian length of $\{-1, 3, 1, 3\}^T$!
A) 17, B) 20, C) 18, D) 15, E) 16

(6) Compute the scalar product of $\{-3, 1, 1, -3\}^T$ and $\{1, 3, 2, 3\}^T$!
A) -11, B) -9, C) -12, D) -10, E) -7

(7) Suppose that a plane contains the point $\{-2, -1, -2\}^T$ and its normal vector is $\{2, -3, -2\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?
A) -4, B) -5, C) -2, D) -3, E) -1

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.6. **No.6.**

(1) Suppose that a plane contains the point $\{3,-1,-1\}^T$ and its normal vector is $\{2,1,3\}^T$. Write down its equation in the form $Ax+By+Cz-D=0$. How much is $(A+B+C)/D$?

A) 0, B) 3, C) 1, D) -1, E) 2

(2) Compute the square of the Eucledian length of $\{-2,-2,-2,-1\}^T$!

A) 8, B) 10, C) 9, D) 11, E) 13

(3) Compute x, if the vectors $\{-2,x,2,-1\}^T$ and $\{-2,2,-1,-1\}^T$ are orthogonal to each other!

A) $-\frac{9}{2}$, B) $-\frac{5}{2}$, C) $-\frac{13}{2}$, D) $-\frac{7}{2}$, E) $-\frac{3}{2}$

(4) Compute the scalar product of $\{1,-1,1,2\}^T$ and $\{2,3,2,-2\}^T$!

A) -3, B) -8, C) -6, D) -5, E) -7

(5) Compute $C=\begin{pmatrix} 2 & 2 \\ -3 & 3 \end{pmatrix}\begin{pmatrix} 2 & 2 \\ 2 & -3 \end{pmatrix}$. How much is the sum of C's entries?

A) -13, B) -11, C) -12, D) -9, E) -14

(6) Suppose that the following equation holds: $\alpha\begin{pmatrix} 1 \\ 0 \end{pmatrix}+\beta\begin{pmatrix} -1 \\ -2 \end{pmatrix}=\begin{pmatrix} 0 \\ -4 \end{pmatrix}$. Compute $\alpha+\beta$!

A) 2, B) 0, C) 1, D) 4, E) -1

(7) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right)=\begin{pmatrix} 2x+4y \\ 4x+2y \end{pmatrix}=A\begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 10, B) 12, C) 9, D) 8, E) 11

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.7. **No.7.**

(1) Compute the scalar product of $\{1,2,1,2\}^T$ and $\{1,2,-3,1\}^T$!

A) 4, B) 0, C) -1, D) 2, E) 1

(2) Compute $C = \begin{pmatrix} -3 & -1 \\ 3 & 3 \end{pmatrix}\begin{pmatrix} 3 & 3 \\ -1 & -1 \end{pmatrix}$. How much is the sum of C's entries?

A) -9, B) -7, C) -8, D) -4, E) -6

(3) Compute x, if the vectors $\{2,x,-1,3\}^T$ and $\{3,-2,-1,1\}^T$ are orthogonal to each other!

A) 3, B) 2, C) 5, D) 0, E) 1

(4) Suppose that a plane contains the point $\{-1,1,2\}^T$ and its normal vector is $\{1,3,2\}^T$. Write down its equation in the form $Ax+By+Cz-D=0$. How much is $(A+B+C)/D$?

A) -3, B) -2, C) -1, D) 0, E) 1

(5) Suppose that the following equation holds: $\alpha\begin{pmatrix} 1 \\ 0 \end{pmatrix}+\beta\begin{pmatrix} -3 \\ -3 \end{pmatrix}=\begin{pmatrix} 0 \\ 3 \end{pmatrix}$. Compute $\alpha+\beta$!

A) -8, B) -4, C) -9, D) -7, E) -5

(6) Compute the square of the Eucledian length of $\{2,1,3,1\}^T$!

A) 14, B) 10, C) 15, D) 16, E) 11

(7) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right)=\begin{pmatrix} 1x+3y \\ 4x+3y \end{pmatrix}=A\begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 7, B) 9, C) 11, D) 12, E) 8

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.8. **No.8.**

(1) Compute x, if the vectors $\{2, x, 2, -1\}^T$ and $\{2, 3, -3, -3\}^T$ are orthogonal to each other!
A) $-\frac{13}{3}$, B) $-\frac{4}{3}$, C) $\frac{5}{3}$, D) $-\frac{1}{3}$, E) $-\frac{10}{3}$

(2) Suppose that the following equation holds: $\alpha \begin{pmatrix} 0 \\ 3 \end{pmatrix} + \beta \begin{pmatrix} -3 \\ -2 \end{pmatrix} = \begin{pmatrix} 3 \\ -7 \end{pmatrix}$. Compute $\alpha + \beta$!
A) -6, B) -8, C) -7, D) -9, E) -4

(3) Compute the square of the Eucledian length of $\{2, 3, -2, 1\}^T$!
A) 17, B) 14, C) 16, D) 18, E) 15

(4) Compute $C = \begin{pmatrix} 3 & 1 \\ -3 & -1 \end{pmatrix} \begin{pmatrix} -2 & 3 \\ 2 & 2 \end{pmatrix}$. How much is the sum of C's entries?
A) -4, B) -2, C) -5, D) 0, E) -3

(5) Compute the scalar product of $\{3, 3, 3, 1\}^T$ and $\{2, -2, 3, 1\}^T$!
A) 11, B) 10, C) 7, D) 8, E) 5

(6) Suppose that a plane contains the point $\{1, -2, -2\}^T$ and its normal vector is $\{-3, 2, 2\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?
A) $-\frac{3}{11}$, B) $-\frac{5}{11}$, C) $-\frac{2}{11}$, D) $-\frac{1}{11}$, E) $-\frac{4}{11}$

(7) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 3x + 5y \\ 2x + 5y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?
A) 12, B) 13, C) 15, D) 11, E) 10

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.9. **No.9.**

(1) Compute the scalar product of $\{-1,-2,-3,2\}^T$ and $\{3,-1,3,3\}^T$!

A) -8, B) -7, C) -4, D) -6, E) -9

(2) Suppose that the following equation holds: $\alpha \begin{pmatrix} -1 \\ 0 \end{pmatrix} + \beta \begin{pmatrix} -2 \\ 1 \end{pmatrix} = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$. Compute $\alpha + \beta$!

A) -6, B) -5, C) -4, D) -7, E) -2

(3) Compute the square of the Eucledian length of $\{2,-2,1,-3\}^T$!

A) 16, B) 15, C) 13, D) 14, E) 18

(4) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 1x+5y \\ 1x+2y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 9, B) 6, C) 7, D) 4, E) 5

(5) Suppose that a plane contains the point $\{-2,2,-1\}^T$ and its normal vector is $\{-3,-3,-1\}^T$. Write down its equation in the form $Ax+By+Cz-D=0$. How much is $(A+B+C)/D$?

A) -9, B) -6, C) -10, D) -11, E) -7

(6) Compute $C = \begin{pmatrix} 1 & 2 \\ -2 & -2 \end{pmatrix} \begin{pmatrix} -1 & -2 \\ -2 & -2 \end{pmatrix}$. How much is the sum of C's entries?

A) -1, B) 3, C) 1, D) 0, E) -2

(7) Compute x, if the vectors $\{2,x,-2,2\}^T$ and $\{-1,-1,-2,-2\}^T$ are orthogonal to each other!

A) -5, B) -7, C) -4, D) -2, E) -6

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Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.10. **No.10.**

(1) Compute $C = \begin{pmatrix} -3 & 1 \\ 1 & -2 \end{pmatrix} \begin{pmatrix} 3 & -1 \\ -2 & -1 \end{pmatrix}$. How much is the sum of C's entries?
A) -4, B) -5, C) -6, D) -1, E) -3

(2) Suppose that a plane contains the point $\{2, 2, -3\}^T$ and its normal vector is $\{1, -1, -1\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?
A) $-\frac{5}{3}$, B) $-\frac{1}{3}$, C) $-\frac{4}{3}$, D) $-\frac{2}{3}$, E) 0

(3) Suppose that the following equation holds: $\alpha \begin{pmatrix} 1 \\ 0 \end{pmatrix} + \beta \begin{pmatrix} 2 \\ -2 \end{pmatrix} = \begin{pmatrix} 5 \\ -4 \end{pmatrix}$. Compute $\alpha + \beta$!
A) -2, B) 3, C) 1, D) 0, E) -1

(4) Compute x, if the vectors $\{-3, x, -2, -1\}^T$ and $\{3, 3, 2, -1\}^T$ are orthogonal to each other!
A) 2, B) 4, C) 0, D) 1, E) -1

(5) Compute the scalar product of $\{-3, 1, 1, -1\}^T$ and $\{-2, 3, 2, -3\}^T$!
A) 10, B) 14, C) 9, D) 11, E) 12

(6) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 5x + 2y \\ 2x + 1y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?
A) 5, B) 10, C) 6, D) 8, E) 7

(7) Compute the square of the Eucledian length of $\{-1, -2, 3, -1\}^T$!
A) 12, B) 15, C) 11, D) 10, E) 13

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.11. **No.11.**

(1) Compute $C = \begin{pmatrix} -2 & 3 \\ 1 & -2 \end{pmatrix} \begin{pmatrix} -3 & -2 \\ -2 & 3 \end{pmatrix}$. How much is the sum of C's entries?

A) 6, B) 3, C) 1, D) 2, E) 4

(2) Suppose that a plane contains the point $\{3, -3, -1\}^T$ and its normal vector is $\{2, 2, 2\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?

A) -7, B) -6, C) -4, D) -3, E) -5

(3) Compute x, if the vectors $\{1, x, 1, -3\}^T$ and $\{-1, -1, 1, -1\}^T$ are orthogonal to each other!

A) 1, B) 0, C) -2, D) 3, E) -1

(4) Suppose that the following equation holds: $\alpha \begin{pmatrix} 0 \\ 1 \end{pmatrix} + \beta \begin{pmatrix} -1 \\ -3 \end{pmatrix} = \begin{pmatrix} 1 \\ 4 \end{pmatrix}$. Compute $\alpha + \beta$!

A) -5, B) -2, C) 0, D) -3, E) 1

(5) Compute the square of the Eucledian length of $\{2, -2, 1, -3\}^T$!

A) 17, B) 16, C) 14, D) 13, E) 18

(6) Compute the scalar product of $\{2, 1, 2, 3\}^T$ and $\{-1, -2, -3, -1\}^T$!

A) -18, B) -15, C) -17, D) -16, E) -13

(7) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 5x + 2y \\ 4x + 5y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 12, B) 16, C) 15, D) 13, E) 14

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.12. **No.12.**

(1) Compute $C = \begin{pmatrix} 3 & -2 \\ 3 & 3 \end{pmatrix} \begin{pmatrix} -2 & 3 \\ 1 & -2 \end{pmatrix}$. How much is the sum of C's entries?

A) 2, B) 3, C) 1, D) 0, E) 5

(2) Compute the square of the Eucledian length of $\{-2, 2, 1, 3\}^T$!

A) 13, B) 18, C) 15, D) 14, E) 16

(3) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 1x + 2y \\ 4x + 4y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 11, B) 6, C) 7, D) 8, E) 9

(4) Compute x, if the vectors $\{3, x, 2, 2\}^T$ and $\{3, 3, -2, -2\}^T$ are orthogonal to each other!

A) $-\frac{4}{3}$, B) $-\frac{13}{3}$, C) $-\frac{1}{3}$, D) $-\frac{7}{3}$, E) $-\frac{16}{3}$

(5) Suppose that the following equation holds: $\alpha \begin{pmatrix} 0 \\ 3 \end{pmatrix} + \beta \begin{pmatrix} -3 \\ -1 \end{pmatrix} = \begin{pmatrix} -3 \\ 8 \end{pmatrix}$. Compute $\alpha + \beta$!

A) 4, B) 1, C) 0, D) -1, E) 2

(6) Suppose that a plane contains the point $\{1, 3, 1\}^T$ and its normal vector is $\{2, 1, 3\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?

A) 0, B) $-\frac{1}{4}$, C) $\frac{3}{4}$, D) $\frac{1}{2}$, E) $\frac{1}{4}$

(7) Compute the scalar product of $\{2, 1, 2, -1\}^T$ and $\{3, 3, 1, 1\}^T$!

A) 7, B) 10, C) 5, D) 6, E) 8

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.13. **No.13.**

(1) Suppose that the following equation holds: $\alpha \begin{pmatrix} 0 \\ -3 \end{pmatrix} + \beta \begin{pmatrix} 3 \\ 3 \end{pmatrix} = \begin{pmatrix} -6 \\ 0 \end{pmatrix}$. Compute $\alpha + \beta$!

A) -5, B) -4, C) -8, D) -6, E) -9

(2) Compute x, if the vectors $\{2, x, -2, 1\}^T$ and $\{1, -3, 1, -1\}^T$ are orthogonal to each other!

A) $-\frac{10}{3}$, B) $-\frac{16}{3}$, C) $-\frac{13}{3}$, D) $-\frac{7}{3}$, E) $-\frac{1}{3}$

(3) Compute the scalar product of $\{-2, -3, -2, 1\}^T$ and $\{-3, -2, 3, 3\}^T$!

A) 4, B) 5, C) 7, D) 9, E) 6

(4) Suppose that a plane contains the point $\{-2, -1, -3\}^T$ and its normal vector is $\{-2, 3, -2\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?

A) $-\frac{1}{7}$, B) $-\frac{3}{7}$, C) $-\frac{5}{7}$, D) 0, E) $-\frac{4}{7}$

(5) Compute $C = \begin{pmatrix} -3 & 3 \\ 3 & -1 \end{pmatrix} \begin{pmatrix} 3 & 3 \\ -1 & 3 \end{pmatrix}$. How much is the sum of C's entries?

A) 4, B) 2, C) 0, D) -1, E) 1

(6) Compute the square of the Eucledian length of $\{1, 3, -2, -1\}^T$!

A) 12, B) 16, C) 14, D) 13, E) 15

(7) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 5x + 1y \\ 5x + 3y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 12, B) 9, C) 11, D) 14, E) 10

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Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.14. **No.14.**

(1) Compute $C = \begin{pmatrix} 1 & -2 \\ 1 & -1 \end{pmatrix} \begin{pmatrix} -2 & 1 \\ -1 & 1 \end{pmatrix}$. How much is the sum of C's entries?
A) -2, B) -3, C) -7, D) -4, E) -5

(2) Compute x, if the vectors $\{-1, x, 2, 1\}^T$ and $\{-1, 1, 2, 1\}^T$ are orthogonal to each other!
A) -9, B) -11, C) -8, D) -6, E) -10

(3) Suppose that the following equation holds: $\alpha \begin{pmatrix} 0 \\ 2 \end{pmatrix} + \beta \begin{pmatrix} -1 \\ 2 \end{pmatrix} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$. Compute $\alpha + \beta$!
A) -3, B) -2, C) -4, D) 0, E) -5

(4) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 3x + 4y \\ 3x + 5y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?
A) 11, B) 10, C) 15, D) 13, E) 12

(5) Compute the scalar product of $\{-3, -2, -1, 3\}^T$ and $\{2, 2, 1, 1\}^T$!
A) -8, B) -12, C) -11, D) -10, E) -13

(6) Compute the square of the Eucledian length of $\{3, 3, 2, -2\}^T$!
A) 24, B) 22, C) 23, D) 21, E) 26

(7) Suppose that a plane contains the point $\{-1, 3, -2\}^T$ and its normal vector is $\{3, -2, 1\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?
A) $-\frac{6}{11}$, B) $-\frac{1}{11}$, C) $-\frac{3}{11}$, D) $-\frac{4}{11}$, E) $-\frac{2}{11}$

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Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.15. **No.15.**

(1) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 4x+1y \\ 5x+2y \end{pmatrix} = A\begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?
A) 9, B) 8, C) 10, D) 12, E) 7

(2) Suppose that the following equation holds: $\alpha\begin{pmatrix} 0 \\ -3 \end{pmatrix} + \beta\begin{pmatrix} -2 \\ 2 \end{pmatrix} = \begin{pmatrix} 4 \\ 2 \end{pmatrix}$. Compute $\alpha+\beta$!
A) -4, B) -7, C) -8, D) -6, E) -9

(3) Compute the scalar product of $\{-2,-3,-1,1\}^T$ and $\{-2,2,2,-3\}^T$!
A) -7, B) -11, C) -10, D) -12, E) -9

(4) Compute $C = \begin{pmatrix} 3 & -2 \\ 2 & 1 \end{pmatrix}\begin{pmatrix} 3 & 2 \\ -3 & -1 \end{pmatrix}$. How much is the sum of C's entries?
A) 27, B) 26, C) 24, D) 29, E) 25

(5) Compute the square of the Eucledian length of $\{2,1,2,-2\}^T$!
A) 13, B) 10, C) 9, D) 11, E) 8

(6) Compute x, if the vectors $\{-3,x,3,-2\}^T$ and $\{-3,3,1,-3\}^T$ are orthogonal to each other!
A) -9, B) -8, C) -11, D) -10, E) -6

(7) Suppose that a plane contains the point $\{-3,-1,-1\}^T$ and its normal vector is $\{2,-3,-2\}^T$. Write down its equation in the form $Ax+By+Cz-D=0$. How much is $(A+B+C)/D$?
A) 3, B) 2, C) 1, D) 0, E) -1

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Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.16. **No.16.**

(1) Suppose that a plane contains the point $\{-3,-1,2\}^T$ and its normal vector is $\{3,1,2\}^T$. Write down its equation in the form $Ax+By+Cz-D=0$. How much is $(A+B+C)/D$?

A) -2, B) -1, C) -4, D) 0, E) -3

(2) Compute $C=\begin{pmatrix} -1 & 3 \\ -3 & 1 \end{pmatrix}\begin{pmatrix} -2 & 1 \\ -3 & -2 \end{pmatrix}$. How much is the sum of C's entries?

A) -19, B) -20, C) -18, D) -21, E) -16

(3) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right)=\begin{pmatrix} 1x+5y \\ 1x+2y \end{pmatrix}=A\begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 9, B) 4, C) 7, D) 8, E) 5

(4) Compute x, if the vectors $\{1,x,-2,-1\}^T$ and $\{-2,-1,-1,-1\}^T$ are orthogonal to each other!

A) -1, B) -2, C) -3, D) 1, E) -4

(5) Suppose that the following equation holds: $\alpha\begin{pmatrix} 0 \\ -3 \end{pmatrix}+\beta\begin{pmatrix} -1 \\ -2 \end{pmatrix}=\begin{pmatrix} -3 \\ -15 \end{pmatrix}$. Compute $\alpha+\beta$!

A) 1, B) 2, C) 4, D) 6, E) 3

(6) Compute the square of the Eucledian length of $\{3,3,-2,-2\}^T$!

A) 24, B) 23, C) 21, D) 22, E) 26

(7) Compute the scalar product of $\{-1,-2,-1,3\}^T$ and $\{3,3,1,3\}^T$!

A) -4, B) -5, C) -6, D) -1, E) -3

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0.17. **No.17.**

(1) Compute $C = \begin{pmatrix} -3 & 3 \\ 3 & -1 \end{pmatrix} \begin{pmatrix} -3 & 2 \\ -2 & 1 \end{pmatrix}$. How much is the sum of C's entries?

A) -7, B) -5, C) -2, D) -6, E) -4

(2) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 3x+4y \\ 5x+1y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 10, B) 12, C) 9, D) 11, E) 13

(3) Compute the scalar product of $\{1,2,1,3\}^T$ and $\{1,1,-1,-3\}^T$!

A) -10, B) -11, C) -9, D) -8, E) -7

(4) Suppose that a plane contains the point $\{1,1,3\}^T$ and its normal vector is $\{-2,-2,1\}^T$. Write down its equation in the form $Ax+By+Cz-D=0$. How much is $(A+B+C)/D$?

A) 3, B) 1, C) 2, D) 0, E) -1

(5) Compute x, if the vectors $\{-1,x,1,1\}^T$ and $\{-1,2,2,-3\}^T$ are orthogonal to each other!

A) -3, B) -4, C) -2, D) 0, E) -5

(6) Suppose that the following equation holds: $\alpha \begin{pmatrix} 1 \\ 0 \end{pmatrix} + \beta \begin{pmatrix} -2 \\ 2 \end{pmatrix} = \begin{pmatrix} 2 \\ -4 \end{pmatrix}$. Compute $\alpha+\beta$!

A) -7, B) -4, C) -9, D) -6, E) -8

(7) Compute the square of the Eucledian length of $\{-3,-3,1,2\}^T$!

A) 19, B) 20, C) 18, D) 23, E) 21

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Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.18. **No.18.**

(1) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 3x+2y \\ 1x+5y \end{pmatrix} = A\begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?
A) 8, B) 6, C) 9, D) 11, E) 7

(2) Compute the scalar product of $\{-1,-1,1,-2\}^T$ and $\{2,2,2,3\}^T$!
A) -10, B) -8, C) -9, D) -11, E) -12

(3) Compute $C = \begin{pmatrix} 1 & 1 \\ -2 & -1 \end{pmatrix}\begin{pmatrix} 1 & -3 \\ 3 & -3 \end{pmatrix}$. How much is the sum of C's entries?
A) -1, B) 2, C) -2, D) 0, E) -3

(4) Compute x, if the vectors $\{2,x,-3,2\}^T$ and $\{-2,2,1,-2\}^T$ are orthogonal to each other!
A) $\frac{5}{2}$, B) $\frac{1}{2}$, C) $\frac{11}{2}$, D) $\frac{3}{2}$, E) $\frac{7}{2}$

(5) Suppose that a plane contains the point $\{1,-3,-3\}^T$ and its normal vector is $\{2,3,3\}^T$. Write down its equation in the form $Ax+By+Cz-D=0$. How much is $(A+B+C)/D$?
A) $-\frac{5}{2}$, B) -2, C) $-\frac{3}{2}$, D) -1, E) $-\frac{1}{2}$

(6) Compute the square of the Eucledian length of $\{-2,-3,-3,3\}^T$!
A) 30, B) 27, C) 29, D) 28, E) 31

(7) Suppose that the following equation holds: $\alpha\begin{pmatrix} 0 \\ 2 \end{pmatrix} + \beta\begin{pmatrix} -3 \\ -3 \end{pmatrix} = \begin{pmatrix} -3 \\ -1 \end{pmatrix}$. Compute $\alpha+\beta$!
A) 0, B) 2, C) -3, D) -2, E) -1

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Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.19. **No.19.**

(1) Suppose that the following equation holds: $\alpha \begin{pmatrix} -3 \\ 0 \end{pmatrix} + \beta \begin{pmatrix} 2 \\ 2 \end{pmatrix} = \begin{pmatrix} 10 \\ 4 \end{pmatrix}$. Compute $\alpha + \beta$!

A) -5, B) 0, C) -4, D) -2, E) -3

(2) Compute the scalar product of $\{-2, 2, 2, -2\}^T$ and $\{3, 1, 1, 1\}^T$!

A) -6, B) -5, C) -7, D) -8, E) -4

(3) Compute x, if the vectors $\{2, x, 2, -3\}^T$ and $\{1, 2, -2, -1\}^T$ are orthogonal to each other!

A) $-\frac{5}{2}$, B) $-\frac{1}{2}$, C) $-\frac{11}{2}$, D) $-\frac{9}{2}$, E) $-\frac{7}{2}$

(4) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 5x + 4y \\ 3x + 3y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 10, B) 12, C) 13, D) 15, E) 11

(5) Compute the square of the Eucledian length of $\{3, -2, -3, -3\}^T$!

A) 29, B) 27, C) 26, D) 31, E) 28

(6) Suppose that a plane contains the point $\{2, -2, -2\}^T$ and its normal vector is $\{1, 1, 2\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?

A) -4, B) -2, C) -3, D) -1, E) -5

(7) Compute $C = \begin{pmatrix} -3 & 1 \\ 1 & -3 \end{pmatrix} \begin{pmatrix} 3 & -3 \\ -1 & -2 \end{pmatrix}$. How much is the sum of C's entries?

A) 3, B) 2, C) 4, D) 6, E) 1

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Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.20. **No.20.**

(1) Suppose that the following equation holds: $\alpha \begin{pmatrix} 0 \\ -2 \end{pmatrix} + \beta \begin{pmatrix} -3 \\ 1 \end{pmatrix} = \begin{pmatrix} 3 \\ 3 \end{pmatrix}$. Compute $\alpha + \beta$!

A) -3, B) -8, C) -7, D) -6, E) -4

(2) Compute $C = \begin{pmatrix} 1 & -2 \\ -2 & -2 \end{pmatrix} \begin{pmatrix} 2 & 3 \\ -2 & -2 \end{pmatrix}$. How much is the sum of C's entries?

A) 6, B) 11, C) 7, D) 8, E) 9

(3) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 5x+5y \\ 2x+2y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 14, B) 11, C) 10, D) 9, E) 12

(4) Compute the square of the Eucledian length of $\{1,-3,3,1\}^T$!

A) 20, B) 17, C) 18, D) 19, E) 15

(5) Compute x, if the vectors $\{-2,x,-2,3\}^T$ and $\{-3,1,3,-3\}^T$ are orthogonal to each other!

A) 6, B) 5, C) 4, D) 9, E) 7

(6) Suppose that a plane contains the point $\{3,1,3\}^T$ and its normal vector is $\{2,1,-3\}^T$. Write down its equation in the form $Ax+By+Cz-D=0$. How much is $(A+B+C)/D$?

A) -3, B) 0, C) -2, D) -4, E) -1

(7) Compute the scalar product of $\{2,-1,1,-1\}^T$ and $\{-2,-3,1,3\}^T$!

A) -7, B) -3, C) -8, D) -6, E) -4

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Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.21. **No.21.**

(1) Suppose that a plane contains the point $\{-2,2,-2\}^T$ and its normal vector is $\{-1,3,-3\}^T$. Write down its equation in the form $Ax+By+Cz-D=0$. How much is $(A+B+C)/D$?

A) $-\frac{3}{14}$, B) $-\frac{2}{7}$, C) $-\frac{5}{14}$, D) $-\frac{1}{14}$, E) $-\frac{1}{7}$

(2) Suppose that the following equation holds: $\alpha\begin{pmatrix}3\\0\end{pmatrix}+\beta\begin{pmatrix}-1\\-3\end{pmatrix}=\begin{pmatrix}10\\3\end{pmatrix}$. Compute $\alpha+\beta$!

A) -3, B) 2, C) 0, D) 3, E) -1

(3) Compute the scalar product of $\{-2,-1,2,-1\}^T$ and $\{1,-2,3,-3\}^T$!

A) 6, B) 4, C) 8, D) 9, E) 5

(4) Compute $C=\begin{pmatrix}-2&3\\3&-3\end{pmatrix}\begin{pmatrix}2&-2\\-1&3\end{pmatrix}$. How much is the sum of C's entries?

A) -2, B) -5, C) -3, D) 0, E) -4

(5) Let $\phi\left(\begin{pmatrix}x\\y\end{pmatrix}\right)=\begin{pmatrix}5x+3y\\5x+4y\end{pmatrix}=A\begin{pmatrix}x\\y\end{pmatrix}$. How much is the sum of A's entries?

A) 14, B) 12, C) 15, D) 17, E) 13

(6) Compute x, if the vectors $\{2,x,-3,3\}^T$ and $\{-2,1,-3,3\}^T$ are orthogonal to each other!

A) -19, B) -14, C) -18, D) -17, E) -16

(7) Compute the square of the Eucledian length of $\{-2,-3,-1,-2\}^T$!

A) 18, B) 13, C) 14, D) 17, E) 15

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Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.22. **No.22.**

(1) Suppose that the following equation holds: $\alpha \begin{pmatrix} 0 \\ 1 \end{pmatrix} + \beta \begin{pmatrix} -1 \\ -2 \end{pmatrix} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$. Compute $\alpha + \beta$!

A) -8, B) -5, C) -7, D) -4, E) -3

(2) Compute the square of the Eucledian length of $\{-2, -1, -1, 2\}^T$!

A) 5, B) 7, C) 9, D) 10, E) 6

(3) Suppose that a plane contains the point $\{-3, -2, -2\}^T$ and its normal vector is $\{-1, -2, 2\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?

A) -1, B) $-\frac{1}{3}$, C) $-\frac{5}{3}$, D) $-\frac{2}{3}$, E) $-\frac{4}{3}$

(4) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 4x + 4y \\ 5x + 2y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 14, B) 11, C) 15, D) 13, E) 10

(5) Compute the scalar product of $\{2, -3, 3, 1\}^T$ and $\{-3, -1, 3, -3\}^T$!

A) -2, B) 3, C) -1, D) 0, E) 1

(6) Compute x, if the vectors $\{3, x, 2, -1\}^T$ and $\{1, 2, 1, 1\}^T$ are orthogonal to each other!

A) -7, B) -2, C) -3, D) -6, E) -5

(7) Compute $C = \begin{pmatrix} -1 & -2 \\ 2 & 3 \end{pmatrix} \begin{pmatrix} -2 & 3 \\ 3 & -3 \end{pmatrix}$. How much is the sum of C's entries?

A) -1, B) 1, C) -2, D) -4, E) -3

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0.23. **No.23.**

(1) Compute x, if the vectors $\{-3, x, 1, 2\}^T$ and $\{2, -3, 2, 1\}^T$ are orthogonal to each other!
A) $-\frac{8}{3}$, B) $-\frac{11}{3}$, C) $-\frac{2}{3}$, D) $-\frac{17}{3}$, E) $-\frac{14}{3}$

(2) Compute the square of the Eucledian length of $\{-2, 1, 1, -2\}^T$!
A) 6, B) 7, C) 8, D) 10, E) 5

(3) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 5x+5y \\ 1x+2y \end{pmatrix} = A\begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?
A) 11, B) 8, C) 13, D) 10, E) 12

(4) Suppose that a plane contains the point $\{-2, -1, 1\}^T$ and its normal vector is $\{3, 2, 2\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?
A) $-\frac{11}{6}$, B) $-\frac{3}{2}$, C) $-\frac{7}{6}$, D) $-\frac{5}{3}$, E) $-\frac{4}{3}$

(5) Compute $C = \begin{pmatrix} -1 & -1 \\ 2 & 3 \end{pmatrix}\begin{pmatrix} -3 & 2 \\ -3 & 3 \end{pmatrix}$. How much is the sum of C's entries?
A) -6, B) -2, C) -1, D) -5, E) -3

(6) Suppose that the following equation holds: $\alpha\begin{pmatrix} 0 \\ 3 \end{pmatrix} + \beta\begin{pmatrix} 2 \\ -2 \end{pmatrix} = \begin{pmatrix} -6 \\ 3 \end{pmatrix}$. Compute $\alpha + \beta$!
A) -7, B) -6, C) -9, D) -4, E) -8

(7) Compute the scalar product of $\{-1, -2, 1, -3\}^T$ and $\{3, 1, -2, -2\}^T$!
A) -6, B) -5, C) -3, D) -2, E) -1

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0.24. **No.24.**

(1) Compute the scalar product of $\{3,-1,-3,3\}^T$ and $\{-3,-1,1,-1\}^T$!

A) -18, B) -15, C) -14, D) -17, E) -19

(2) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 2x+1y \\ 3x+5y \end{pmatrix} = A\begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 8, B) 7, C) 6, D) 9, E) 11

(3) Compute x, if the vectors $\{2,x,-3,-2\}^T$ and $\{-1,-3,-1,3\}^T$ are orthogonal to each other!

A) $-\frac{5}{3}$, B) $-\frac{20}{3}$, C) $-\frac{11}{3}$, D) $-\frac{17}{3}$, E) $-\frac{14}{3}$

(4) Compute $C = \begin{pmatrix} 3 & 3 \\ -2 & 2 \end{pmatrix}\begin{pmatrix} 2 & 3 \\ 2 & -2 \end{pmatrix}$. How much is the sum of C's entries?

A) 3, B) 1, C) 2, D) 5, E) 0

(5) Compute the square of the Eucledian length of $\{2,-1,3,-2\}^T$!

A) 13, B) 14, C) 17, D) 15, E) 18

(6) Suppose that the following equation holds: $\alpha\begin{pmatrix} -1 \\ 0 \end{pmatrix} + \beta\begin{pmatrix} 1 \\ 3 \end{pmatrix} = \begin{pmatrix} 1 \\ -6 \end{pmatrix}$. Compute $\alpha+\beta$!

A) -5, B) -7, C) -8, D) -10, E) -9

(7) Suppose that a plane contains the point $\{3,-3,-3\}^T$ and its normal vector is $\{2,3,-3\}^T$. Write down its equation in the form $Ax+By+Cz-D=0$. How much is $(A+B+C)/D$?

A) -1, B) $-\frac{2}{3}$, C) $-\frac{1}{3}$, D) 0, E) $\frac{1}{3}$

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0.25. **No.25.**

(1) Compute x, if the vectors $\{2, x, -2, 2\}^T$ and $\{3, 1, -2, 1\}^T$ are orthogonal to each other!
A) -14, B) -11, C) -13, D) -12, E) -17

(2) Compute the square of the Eucledian length of $\{2, 3, -2, -2\}^T$!
A) 20, B) 21, C) 16, D) 19, E) 17

(3) Suppose that the following equation holds: $\alpha \begin{pmatrix} 0 \\ 3 \end{pmatrix} + \beta \begin{pmatrix} -2 \\ -2 \end{pmatrix} = \begin{pmatrix} -2 \\ 4 \end{pmatrix}$. Compute $\alpha + \beta$!
A) 3, B) 1, C) 0, D) -1, E) -2

(4) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 2x + 3y \\ 5x + 3y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?
A) 13, B) 11, C) 12, D) 9, E) 8

(5) Compute $C = \begin{pmatrix} -2 & 2 \\ 3 & 1 \end{pmatrix} \begin{pmatrix} -1 & -1 \\ -1 & -3 \end{pmatrix}$. How much is the sum of C's entries?
A) -18, B) -16, C) -19, D) -15, E) -14

(6) Compute the scalar product of $\{2, 3, 2, 3\}^T$ and $\{3, 2, 3, -1\}^T$!
A) 10, B) 13, C) 12, D) 11, E) 15

(7) Suppose that a plane contains the point $\{2, -1, -1\}^T$ and its normal vector is $\{-3, 1, -2\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?
A) $\frac{3}{5}$, B) $\frac{2}{5}$, C) $\frac{1}{5}$, D) 0, E) $\frac{4}{5}$

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Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.26. **No.26.**

(1) Compute x, if the vectors $\{-1, x, 3, 3\}^T$ and $\{-1, -3, -1, 1\}^T$ are orthogonal to each other!
A) $-\frac{8}{3}$, B) $-\frac{2}{3}$, C) $-\frac{14}{3}$, D) $\frac{1}{3}$, E) $-\frac{11}{3}$

(2) Compute the scalar product of $\{3, 3, -2, -3\}^T$ and $\{1, 3, -3, -2\}^T$!
A) 25, B) 20, C) 24, D) 22, E) 19

(3) Suppose that a plane contains the point $\{1, 1, 2\}^T$ and its normal vector is $\{2, -3, 2\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?
A) $-\frac{2}{3}$, B) $\frac{1}{3}$, C) -1, D) $-\frac{1}{3}$, E) 0

(4) Suppose that the following equation holds: $\alpha \begin{pmatrix} 0 \\ 3 \end{pmatrix} + \beta \begin{pmatrix} 1 \\ -2 \end{pmatrix} = \begin{pmatrix} 1 \\ -8 \end{pmatrix}$. Compute $\alpha + \beta$!
A) -6, B) -1, C) -4, D) -3, E) -5

(5) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 2x + 4y \\ 1x + 1y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?
A) 8, B) 3, C) 4, D) 6, E) 9

(6) Compute the square of the Eucledian length of $\{1, 3, -2, 3\}^T$!
A) 20, B) 21, C) 22, D) 18, E) 23

(7) Compute $C = \begin{pmatrix} -3 & -1 \\ 3 & 1 \end{pmatrix} \begin{pmatrix} 1 & -2 \\ 2 & 3 \end{pmatrix}$. How much is the sum of C's entries?
A) 0, B) -2, C) -5, D) -3, E) -4

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.27. **No.27.**

(1) Compute x, if the vectors $\{3, x, 1, 1\}^T$ and $\{2, 3, -1, -3\}^T$ are orthogonal to each other!
A) $-\frac{5}{3}$, B) $-\frac{8}{3}$, C) $-\frac{2}{3}$, D) $-\frac{14}{3}$, E) $-\frac{17}{3}$

(2) Compute the scalar product of $\{-2, -2, -2, 3\}^T$ and $\{-1, 2, 3, 3\}^T$!
A) -2, B) -1, C) 1, D) -4, E) -3

(3) Compute $C = \begin{pmatrix} -3 & -3 \\ 3 & -2 \end{pmatrix} \begin{pmatrix} -2 & 2 \\ 1 & 2 \end{pmatrix}$. How much is the sum of C's entries?
A) -20, B) -17, C) -18, D) -15, E) -16

(4) Compute the square of the Eucledian length of $\{3, 2, -3, -1\}^T$!
A) 20, B) 22, C) 19, D) 23, E) 18

(5) Suppose that a plane contains the point $\{3, -1, 1\}^T$ and its normal vector is $\{-2, 2, 2\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?
A) $-\frac{1}{3}$, B) $-\frac{2}{3}$, C) $-\frac{4}{3}$, D) $-\frac{5}{3}$, E) -1

(6) Suppose that the following equation holds: $\alpha \begin{pmatrix} 0 \\ 3 \end{pmatrix} + \beta \begin{pmatrix} -1 \\ -1 \end{pmatrix} = \begin{pmatrix} -2 \\ 1 \end{pmatrix}$. Compute $\alpha + \beta$!
A) -2, B) 2, C) 3, D) 1, E) 0

(7) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 4x + 2y \\ 1x + 4y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?
A) 6, B) 8, C) 9, D) 11, E) 7

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.28. **No.28.**

(1) Suppose that the following equation holds: $\alpha \begin{pmatrix} 2 \\ 0 \end{pmatrix} + \beta \begin{pmatrix} -3 \\ 3 \end{pmatrix} = \begin{pmatrix} -15 \\ 9 \end{pmatrix}$. Compute $\alpha + \beta$!

A) 0, B) -5, C) -2, D) -4, E) -3

(2) Compute $C = \begin{pmatrix} -3 & -2 \\ 3 & 2 \end{pmatrix} \begin{pmatrix} 2 & -2 \\ -2 & 3 \end{pmatrix}$. How much is the sum of C's entries?

A) -2, B) 0, C) -5, D) -3, E) -4

(3) Compute the square of the Eucledian length of $\{1, -3, 2, 2\}^T$!

A) 15, B) 19, C) 18, D) 16, E) 14

(4) Compute the scalar product of $\{-3, -1, 3, -2\}^T$ and $\{3, -2, -3, 1\}^T$!

A) -18, B) -21, C) -23, D) -22, E) -20

(5) Suppose that a plane contains the point $\{2, 2, -1\}^T$ and its normal vector is $\{-3, -1, 2\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?

A) $-\frac{2}{5}$, B) $-\frac{1}{5}$, C) 0, D) $-\frac{3}{5}$, E) $\frac{1}{5}$

(6) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 1x + 5y \\ 2x + 3y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 9, B) 8, C) 11, D) 7, E) 6

(7) Compute x, if the vectors $\{-1, x, -3, -2\}^T$ and $\{-2, 1, 1, 3\}^T$ are orthogonal to each other!

A) 4, B) 6, C) 5, D) 7, E) 2

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.29. **No.29.**

(1) Suppose that the following equation holds: $\alpha \begin{pmatrix} 0 \\ 2 \end{pmatrix} + \beta \begin{pmatrix} -2 \\ 1 \end{pmatrix} = \begin{pmatrix} -2 \\ -5 \end{pmatrix}$. Compute $\alpha + \beta$!

A) -5, B) -3, C) -7, D) -4, E) -2

(2) Compute the square of the Eucledian length of $\{3, -2, 3, -1\}^T$!

A) 18, B) 19, C) 20, D) 24, E) 23

(3) Compute $C = \begin{pmatrix} -3 & -3 \\ -2 & 1 \end{pmatrix} \begin{pmatrix} -1 & -2 \\ 3 & 1 \end{pmatrix}$. How much is the sum of C's entries?

A) 2, B) 7, C) 4, D) 3, E) 5

(4) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 5x + 3y \\ 1x + 3y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 8, B) 7, C) 12, D) 9, E) 10

(5) Compute the scalar product of $\{-1, -1, -2, -3\}^T$ and $\{3, -3, 2, -1\}^T$!

A) -1, B) -4, C) -6, D) -3, E) -5

(6) Suppose that a plane contains the point $\{3, -2, 1\}^T$ and its normal vector is $\{-3, 1, -1\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?

A) $-\frac{1}{2}$, B) $-\frac{1}{4}$, C) 0, D) $\frac{1}{4}$, E) $-\frac{3}{4}$

(7) Compute x, if the vectors $\{1, x, -1, -2\}^T$ and $\{1, 1, -1, 1\}^T$ are orthogonal to each other!

A) -5, B) -1, C) 1, D) -4, E) 0

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Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.30. **No.30.**

(1) Suppose that a plane contains the point $\{-2,1,-2\}^T$ and its normal vector is $\{3,3,2\}^T$. Write down its equation in the form $Ax+By+Cz-D=0$. How much is $(A+B+C)/D$?
A) $-\frac{10}{7}$, B) $-\frac{8}{7}$, C) $-\frac{11}{7}$, D) $-\frac{12}{7}$, E) $-\frac{9}{7}$

(2) Compute $C=\begin{pmatrix} -2 & -2 \\ 3 & -3 \end{pmatrix}\begin{pmatrix} 2 & -2 \\ 2 & -3 \end{pmatrix}$. How much is the sum of C's entries?
A) 3, B) 1, C) 0, D) 5, E) 2

(3) Suppose that the following equation holds: $\alpha\begin{pmatrix} 0 \\ -1 \end{pmatrix}+\beta\begin{pmatrix} -3 \\ 2 \end{pmatrix}=\begin{pmatrix} -3 \\ 4 \end{pmatrix}$. Compute $\alpha+\beta$!
A) -1, B) -6, C) -3, D) -5, E) -2

(4) Compute the scalar product of $\{-2,-3,-1,-1\}^T$ and $\{-2,-3,-1,-2\}^T$!
A) 16, B) 11, C) 12, D) 14, E) 15

(5) Compute x, if the vectors $\{-1,x,1,3\}^T$ and $\{2,-1,1,1\}^T$ are orthogonal to each other!
A) -2, B) 0, C) 2, D) -3, E) -1

(6) Compute the square of the Eucledian length of $\{1,-1,3,-2\}^T$!
A) 15, B) 13, C) 12, D) 11, E) 10

(7) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right)=\begin{pmatrix} 2x+3y \\ 3x+3y \end{pmatrix}=A\begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?
A) 6, B) 9, C) 11, D) 10, E) 8

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.31. **No.31.**

(1) Compute x, if the vectors $\{1, x, -3, 1\}^T$ and $\{1, 3, 3, -2\}^T$ are orthogonal to each other!
A) $-\frac{5}{3}$, B) $\frac{4}{3}$, C) $\frac{10}{3}$, D) $\frac{1}{3}$, E) $\frac{7}{3}$

(2) Compute the square of the Eucledian length of $\{-1, 1, -1, 1\}^T$!
A) 1, B) 2, C) 0, D) -1, E) 4

(3) Suppose that the following equation holds: $\alpha \begin{pmatrix} -3 \\ 0 \end{pmatrix} + \beta \begin{pmatrix} -1 \\ -3 \end{pmatrix} = \begin{pmatrix} -9 \\ -9 \end{pmatrix}$. Compute $\alpha + \beta$!
A) 1, B) 3, C) 0, D) 5, E) 2

(4) Compute $C = \begin{pmatrix} -1 & -3 \\ -2 & -3 \end{pmatrix} \begin{pmatrix} 3 & 1 \\ 2 & -1 \end{pmatrix}$. How much is the sum of C's entries?
A) -22, B) -20, C) -18, D) -19, E) -21

(5) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 4x + 1y \\ 3x + 5y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?
A) 13, B) 8, C) 12, D) 10, E) 9

(6) Suppose that a plane contains the point $\{2, 1, 3\}^T$ and its normal vector is $\{3, 3, -2\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?
A) 1, B) 0, C) $\frac{2}{3}$, D) $\frac{4}{3}$, E) $\frac{1}{3}$

(7) Compute the scalar product of $\{-2, -1, -3, -2\}^T$ and $\{-2, 3, -3, -2\}^T$!
A) 10, B) 11, C) 9, D) 12, E) 14

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.32. **No.32.**

(1) Suppose that the following equation holds: $\alpha \begin{pmatrix} -3 \\ 0 \end{pmatrix} + \beta \begin{pmatrix} 3 \\ -2 \end{pmatrix} = \begin{pmatrix} 3 \\ 2 \end{pmatrix}$. Compute $\alpha + \beta$!

A) -6, B) -8, C) -7, D) -5, E) -3

(2) Compute x, if the vectors $\{2, x, 1, -3\}^T$ and $\{1, -2, -1, 1\}^T$ are orthogonal to each other!

A) -3, B) -4, C) -1, D) -5, E) -6

(3) Compute the square of the Eucledian length of $\{-3, -3, -3, -3\}^T$!

A) 35, B) 36, C) 31, D) 32, E) 34

(4) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 1x + 3y \\ 2x + 1y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 3, B) 2, C) 5, D) 7, E) 4

(5) Compute the scalar product of $\{3, 2, 2, 3\}^T$ and $\{-1, 2, -3, -2\}^T$!

A) -16, B) -10, C) -9, D) -11, E) -15

(6) Compute $C = \begin{pmatrix} 2 & 1 \\ -1 & 3 \end{pmatrix} \begin{pmatrix} -2 & -1 \\ 2 & -3 \end{pmatrix}$. How much is the sum of C's entries?

A) -11, B) -7, C) -12, D) -8, E) -10

(7) Suppose that a plane contains the point $\{-1, -2, 3\}^T$ and its normal vector is $\{2, -2, 1\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?

A) $-\frac{2}{5}$, B) $-\frac{3}{5}$, C) $\frac{2}{5}$, D) $-\frac{1}{5}$, E) $\frac{1}{5}$

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.33. **No.33.**

(1) Suppose that the following equation holds: $\alpha \begin{pmatrix} 0 \\ -3 \end{pmatrix} + \beta \begin{pmatrix} 3 \\ -2 \end{pmatrix} = \begin{pmatrix} 6 \\ -1 \end{pmatrix}$. Compute $\alpha + \beta$!

A) -4, B) 0, C) -2, D) -1, E) 1

(2) Compute the square of the Eucledian length of $\{2, 1, -1, 3\}^T$!

A) 17, B) 18, C) 10, D) 15, E) 14

(3) Compute x, if the vectors $\{2, x, -3, 1\}^T$ and $\{3, 3, 1, -3\}^T$ are orthogonal to each other!

A) -5, B) -4, C) -2, D) 0, E) -3

(4) Compute $C = \begin{pmatrix} 1 & -2 \\ -1 & -2 \end{pmatrix} \begin{pmatrix} -2 & 3 \\ -2 & 3 \end{pmatrix}$. How much is the sum of C's entries?

A) -7, B) -8, C) -6, D) -9, E) -4

(5) Compute the scalar product of $\{3, 3, 1, 2\}^T$ and $\{3, 2, 2, -3\}^T$!

A) 7, B) 11, C) 6, D) 8, E) 10

(6) Suppose that a plane contains the point $\{2, -2, -3\}^T$ and its normal vector is $\{-1, -3, 1\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?

A) -4, B) -3, C) -6, D) -5, E) -7

(7) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 1x + 1y \\ 1x + 1y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 0, B) 1, C) -1, D) 4, E) 2

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.34. **No.34.**

(1) Suppose that the following equation holds: $\alpha \begin{pmatrix} 0 \\ -2 \end{pmatrix} + \beta \begin{pmatrix} -1 \\ -1 \end{pmatrix} = \begin{pmatrix} 2 \\ -2 \end{pmatrix}$. Compute $\alpha + \beta$!

A) 0, B) -1, C) -4, D) -3, E) -2

(2) Suppose that a plane contains the point $\{2, -3, -2\}^T$ and its normal vector is $\{-1, 3, 2\}^T$. Write down its equation in the form $Ax + By + Cz - D = 0$. How much is $(A + B + C)/D$?

A) $-\frac{2}{5}$, B) $-\frac{4}{15}$, C) $-\frac{1}{3}$, D) $-\frac{8}{15}$, E) $-\frac{7}{15}$

(3) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 5x + 1y \\ 4x + 1y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?

A) 6, B) 9, C) 10, D) 7, E) 11

(4) Compute the square of the Eucledian length of $\{-2, -1, -1, 1\}^T$!

A) 6, B) 8, C) 3, D) 5, E) 7

(5) Compute x, if the vectors $\{2, x, -1, 3\}^T$ and $\{1, 2, 3, 3\}^T$ are orthogonal to each other!

A) -7, B) -5, C) -6, D) -8, E) -4

(6) Compute the scalar product of $\{2, -2, 3, -2\}^T$ and $\{-1, 2, -3, -2\}^T$!

A) -15, B) -13, C) -16, D) -14, E) -11

(7) Compute $C = \begin{pmatrix} 1 & 2 \\ 3 & -1 \end{pmatrix} \begin{pmatrix} -2 & -3 \\ -1 & -2 \end{pmatrix}$. How much is the sum of C's entries?

A) -23, B) -26, C) -25, D) -28, E) -27

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Quiz.1.Math.Econ.Anal.14.09.25. NEPTUN: Name:

0.35. **No.35.**

(1) Compute $C = \begin{pmatrix} -3 & 2 \\ -2 & 2 \end{pmatrix} \begin{pmatrix} -3 & -1 \\ 3 & 1 \end{pmatrix}$. How much is the sum of C's entries?
A) 35, B) 31, C) 36, D) 33, E) 34

(2) Compute the scalar product of $\{-3,-2,2,-3\}^T$ and $\{1,-1,-1,1\}^T$!
A) -8, B) -6, C) -9, D) -11, E) -10

(3) Compute the square of the Eucledian length of $\{2,2,1,-2\}^T$!
A) 12, B) 8, C) 9, D) 13, E) 10

(4) Suppose that the following equation holds: $\alpha \begin{pmatrix} 1 \\ 0 \end{pmatrix} + \beta \begin{pmatrix} 2 \\ -2 \end{pmatrix} = \begin{pmatrix} 2 \\ -4 \end{pmatrix}$. Compute $\alpha + \beta$!
A) -3, B) 0, C) -1, D) -2, E) -5

(5) Compute x, if the vectors $\{-3,x,-2,-1\}^T$ and $\{2,1,2,2\}^T$ are orthogonal to each other!
A) 8, B) 12, C) 9, D) 10, E) 7

(6) Suppose that a plane contains the point $\{1,-1,2\}^T$ and its normal vector is $\{1,2,-2\}^T$. Write down its equation in the form $Ax+By+Cz-D=0$. How much is $(A+B+C)/D$?
A) $-\frac{3}{5}$, B) -1, C) $-\frac{4}{5}$, D) $-\frac{1}{5}$, E) $-\frac{2}{5}$

(7) Let $\phi\left(\begin{pmatrix} x \\ y \end{pmatrix}\right) = \begin{pmatrix} 2x+5y \\ 2x+1y \end{pmatrix} = A \begin{pmatrix} x \\ y \end{pmatrix}$. How much is the sum of A's entries?
A) 7, B) 9, C) 8, D) 5, E) 10

1^1: , 2^1: , 3^1: , 4^1: , 5^1: , 6^1: , 7^1: ,

Solutions

1	1^1:A,	2^1:E,	3^1:E,	4^1:D,	5^1:D,	6^1:D,	7^1:A,
2	1^1:D,	2^1:B,	3^1:B,	4^1:D,	5^1:E,	6^1:A,	7^1:C,
3	1^1:D,	2^1:A,	3^1:C,	4^1:A,	5^1:B,	6^1:A,	7^1:A,
4	1^1:E,	2^1:C,	3^1:D,	4^1:B,	5^1:C,	6^1:B,	7^1:B,
5	1^1:A,	2^1:A,	3^1:E,	4^1:C,	5^1:B,	6^1:E,	7^1:E,
6	1^1:B,	2^1:E,	3^1:E,	4^1:A,	5^1:D,	6^1:D,	7^1:B,
7	1^1:A,	2^1:D,	3^1:C,	4^1:E,	5^1:B,	6^1:C,	7^1:C,
8	1^1:D,	2^1:E,	3^1:D,	4^1:D,	5^1:B,	6^1:D,	7^1:C,
9	1^1:C,	2^1:E,	3^1:E,	4^1:A,	5^1:E,	6^1:B,	7^1:D,
10	1^1:D,	2^1:B,	3^1:B,	4^1:B,	5^1:B,	6^1:B,	7^1:B,
11	1^1:A,	2^1:D,	3^1:D,	4^1:C,	5^1:E,	6^1:E,	7^1:B,
12	1^1:E,	2^1:B,	3^1:A,	4^1:C,	5^1:A,	6^1:C,	7^1:B,
13	1^1:B,	2^1:E,	3^1:D,	4^1:A,	5^1:A,	6^1:E,	7^1:D,
14	1^1:A,	2^1:D,	3^1:D,	4^1:C,	5^1:A,	6^1:E,	7^1:E,
15	1^1:D,	2^1:A,	3^1:A,	4^1:D,	5^1:A,	6^1:E,	7^1:A,
16	1^1:B,	2^1:E,	3^1:A,	4^1:D,	5^1:D,	6^1:E,	7^1:D,
17	1^1:C,	2^1:E,	3^1:E,	4^1:A,	5^1:D,	6^1:B,	7^1:D,
18	1^1:D,	2^1:B,	3^1:B,	4^1:C,	5^1:E,	6^1:E,	7^1:B,
19	1^1:B,	2^1:E,	3^1:B,	4^1:D,	5^1:D,	6^1:D,	7^1:D,
20	1^1:A,	2^1:B,	3^1:A,	4^1:A,	5^1:D,	6^1:B,	7^1:B,
21	1^1:D,	2^1:B,	3^1:D,	4^1:D,	5^1:D,	6^1:B,	7^1:A,
22	1^1:E,	2^1:D,	3^1:B,	4^1:C,	5^1:B,	6^1:B,	7^1:B,
23	1^1:C,	2^1:D,	3^1:C,	4^1:C,	5^1:C,	6^1:D,	7^1:E,
24	1^1:C,	2^1:E,	3^1:A,	4^1:D,	5^1:E,	6^1:A,	7^1:E,
25	1^1:D,	2^1:B,	3^1:A,	4^1:A,	5^1:E,	6^1:E,	7^1:E,
26	1^1:D,	2^1:C,	3^1:B,	4^1:B,	5^1:A,	6^1:E,	7^1:A,
27	1^1:C,	2^1:C,	3^1:D,	4^1:D,	5^1:A,	6^1:C,	7^1:D,
28	1^1:A,	2^1:B,	3^1:C,	4^1:A,	5^1:E,	6^1:C,	7^1:D,
29	1^1:E,	2^1:E,	3^1:B,	4^1:C,	5^1:A,	6^1:D,	7^1:E,
30	1^1:B,	2^1:D,	3^1:A,	4^1:A,	5^1:C,	6^1:A,	7^1:C,
31	1^1:C,	2^1:E,	3^1:D,	4^1:C,	5^1:A,	6^1:D,	7^1:E,
32	1^1:E,	2^1:C,	3^1:B,	4^1:D,	5^1:D,	6^1:B,	7^1:E,
33	1^1:E,	2^1:D,	3^1:D,	4^1:E,	5^1:B,	6^1:B,	7^1:D,
34	1^1:A,	2^1:B,	3^1:E,	4^1:E,	5^1:E,	6^1:E,	7^1:A,
35	1^1:C,	2^1:B,	3^1:D,	4^1:B,	5^1:B,	6^1:D,	7^1:E,