

Lembar Kerja Peserta Didik

LKPD

Matematika

Nama: _____

Kelas: _____

Penjumlahan Matriks

Petunjuk: "Yang dekat belum tentu jodoh"

(In matrix addition, the elements that are added are the elements that are in the same position, not the ones that are next to each other)

1. $A = \begin{bmatrix} 4 & 2 \\ 1 & 3 \end{bmatrix} \quad D = \begin{bmatrix} 3 & 5 \\ 6 & 7 \end{bmatrix}$

$A + D$ $\begin{bmatrix} \square & + & \square & \square & + & \square \\ \square & + & \square & \square & + & \square \end{bmatrix} = \begin{bmatrix} \square & \square \\ \square & \square \end{bmatrix}$

2. $R = \begin{bmatrix} 10 & 3 \\ 4 & 6 \end{bmatrix} \quad Z = \begin{bmatrix} 2 & 1 \\ 5 & -9 \end{bmatrix}$

$R + Z$ $\begin{bmatrix} \square & + & \square & \square & + & \square \\ \square & + & \square & \square & + & \square \end{bmatrix} = \begin{bmatrix} \square & \square \\ \square & \square \end{bmatrix}$

3. $H = \begin{bmatrix} -5 & 3 \\ 2 & 3 \end{bmatrix} \quad J = \begin{bmatrix} 3 & 14 \\ -2 & 7 \end{bmatrix}$

$H + J$ $\begin{bmatrix} \square & + & \square & \square & + & \square \\ \square & + & \square & \square & + & \square \end{bmatrix} = \begin{bmatrix} \square & \square \\ \square & \square \end{bmatrix}$

Perkalian Matriks

Petunjuk: Tentukan apakah perkalian berikut dapat dilakukan!

$$P = \begin{bmatrix} 1 & 3 & 5 \\ 2 & 4 & 6 \\ 7 & 9 & 2 \end{bmatrix}$$

$$Q = [2 \quad 5 \quad 0]$$

☐ Bisa dikalikan

☐ Tidak bisa dikalikan

Jika bisa, tentukan ordo hasilnya: _____

Petunjuk: Hasil hari ini ditentukan oleh siapa yang pernah sejajar di masa lalu.
Yang pernah berada dalam satu baris akan mencari pasangannya di kolom masa depan.

$$N = \begin{bmatrix} 2 & 7 \\ 6 & 12 \end{bmatrix}$$

$$Y = \begin{bmatrix} 8 & 9 \\ 3 & 10 \end{bmatrix}$$

Tugas : Hitung $N \times Y$

1. Elemen baris 1 kolom 1

$$(\dots \times \dots) + (\dots \times \dots) = \dots + \dots = \dots$$

2. Elemen baris 1 kolom 2

$$(\dots \times \dots) + (\dots \times \dots) = \dots + \dots = \dots$$

3. Elemen baris 2 kolom 1

$$(\dots \times \dots) + (\dots \times \dots) = \dots + \dots = \dots$$

4. Elemen baris 2 kolom 2

$$(\dots \times \dots) + (\dots \times \dots) = \dots + \dots = \dots$$

$$N \times Y = \begin{bmatrix} \dots & \dots \\ \dots & \dots \end{bmatrix}$$

Jenis - Jenis Matriks

Petunjuk: Sebutkan jenis matriks dibawah ini

$$A = \begin{bmatrix} 3 \\ -1 \\ 4 \end{bmatrix}$$

$$B = \begin{bmatrix} 2 & 5 & 0 \end{bmatrix}$$

$$C = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$$

$$D = \begin{bmatrix} 5 & 0 & 0 \\ 0 & 2 & 0 \\ 0 & 0 & 7 \end{bmatrix}$$

$$E = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$$

$$F = \begin{bmatrix} 4 & 0 \\ 0 & 4 \end{bmatrix}$$

Pengurangan Matriks

Petunjuk: Kenangan lama tidak boleh tertukar, sama seperti angka matriks yang hanya boleh dikurang dengan pasangan seposisinya.

$$A = \begin{bmatrix} 10 & 6 \\ 4 & 9 \end{bmatrix}, B = \begin{bmatrix} 3 & 2 \\ 1 & 5 \end{bmatrix}$$

$$A - B = \begin{bmatrix} \square & \square \\ \square & \square \end{bmatrix}$$

$$P = \begin{bmatrix} 15 & 8 \\ 7 & 12 \end{bmatrix}, Q = \begin{bmatrix} 5 & 3 \\ 2 & 6 \end{bmatrix}$$

$$P - Q = \begin{bmatrix} \square & \square \\ \square & \square \end{bmatrix}$$

$$M = \begin{bmatrix} 6 & -4 \\ 3 & 8 \end{bmatrix}, N = \begin{bmatrix} 2 & 5 \\ 7 & -1 \end{bmatrix}$$

$$M - N = \begin{bmatrix} \square & \square \\ \square & \square \end{bmatrix}$$

$$D = \begin{bmatrix} 3 & -7 \\ 5 & 6 \end{bmatrix}, Z = \begin{bmatrix} 1 & 4 \\ 3 & 5 \end{bmatrix}$$

$$D - Z = \begin{bmatrix} \square & \square \\ \square & \square \end{bmatrix}$$

Perkalian Skalar Matriks

**Petunjuk: Kalau dikali skalar, semua anggota matriks
kena imbasnya nggak ada yang bisa ngumpet!**

$$H = \begin{bmatrix} 3 & 5 \\ 2 & 4 \end{bmatrix}$$

$$2H = 2 \times \begin{bmatrix} \square & \square \\ \square & \square \end{bmatrix} = \begin{bmatrix} \square & \square \\ \square & \square \end{bmatrix}$$

$$R = \begin{bmatrix} 4 & -1 \\ 0 & 7 \end{bmatrix}$$

$$3R = 3 \times \begin{bmatrix} \square & \square \\ \square & \square \end{bmatrix} = \begin{bmatrix} \square & \square \\ \square & \square \end{bmatrix}$$

$$A = \begin{bmatrix} 6 & 2 \\ 5 & 1 \end{bmatrix}$$

$$\frac{1}{2}A = \frac{1}{2} \times \begin{bmatrix} \square & \square \\ \square & \square \end{bmatrix} = \begin{bmatrix} \square & \square \\ \square & \square \end{bmatrix}$$