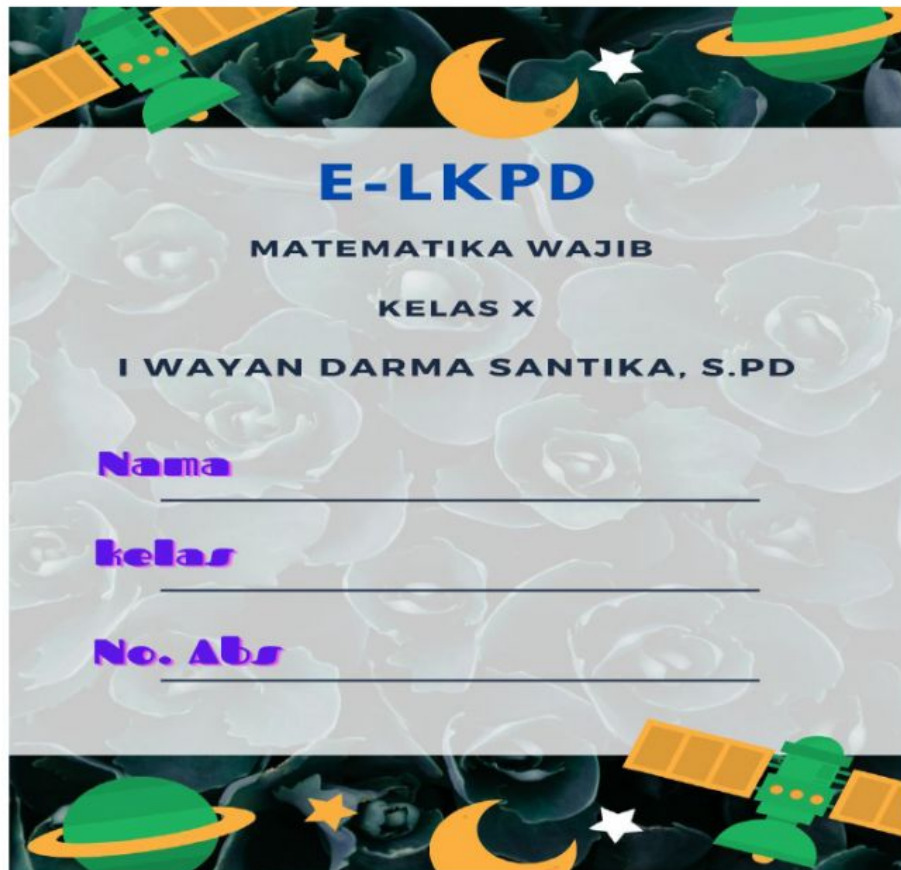




## TUGAS 4



**E-LKPD**

**MATEMATIKA WAJIB**

**KELAS X**

**I WAYAN DARMA SANTIKA, S.PD**

**Nama** \_\_\_\_\_

**kelas** \_\_\_\_\_

**No. Abs** \_\_\_\_\_

**SMA NEGERI 1 BEBANDEM**  
**DINAS PENDIDIKAN PROVINSI BALI**

**2021**

## A. MATERI

|  |
|--|
|  |
|--|

## B. CONTOH SOAL

### Contoh Soal Tugas 4

1. Diketahui vektor  $\vec{u} = 2\vec{i} - 7\vec{j}$  dan vektor  $\vec{v} = 5\vec{i} + 2\vec{j}$ . Hitunglah hasil kali skalar  $\vec{u} \cdot \vec{v}$  !

Jawab

|                                                          |   |                                                                                                            |
|----------------------------------------------------------|---|------------------------------------------------------------------------------------------------------------|
| Diketahui                                                | : | $\vec{u} = 2\vec{i} - 7\vec{j} \rightarrow \vec{u} = \begin{pmatrix} 2 \\ -7 \end{pmatrix}$                |
|                                                          |   | $\vec{v} = 5\vec{i} + 2\vec{j} \rightarrow \vec{v} = \begin{pmatrix} 5 \\ 2 \end{pmatrix}$                 |
| Ditanyakan                                               | : | $\vec{u} \cdot \vec{v} = \dots ?$                                                                          |
| Penyelesaian                                             |   | $\vec{u} \cdot \vec{v} = \begin{pmatrix} 2 \\ -7 \end{pmatrix} \cdot \begin{pmatrix} 5 \\ 2 \end{pmatrix}$ |
|                                                          |   | $\vec{u} \cdot \vec{v} = (2)(5) + (-7)(2)$                                                                 |
|                                                          |   | $\vec{u} \cdot \vec{v} = 10 + (-14)$                                                                       |
|                                                          |   | $\vec{u} \cdot \vec{v} = 10 - 14$                                                                          |
|                                                          |   | $\vec{u} \cdot \vec{v} = -4$                                                                               |
| Jadi hasil kali skalar $\vec{u} \cdot \vec{v}$ adalah -4 |   |                                                                                                            |

2. Diketahui vektor  $\vec{p} = 3\vec{i} + 2\vec{j} - \vec{k}$  dan vektor  $\vec{q} = 2\vec{i} + 5\vec{j} + 3\vec{k}$ .  
Hitunglah hasil kali skalar  $\vec{p} \cdot \vec{q}$  !

Jawab

|            |   |                                                                                                                  |
|------------|---|------------------------------------------------------------------------------------------------------------------|
| Diketahui  | : | $\vec{p} = 3\vec{i} + 2\vec{j} - \vec{k} \quad \rightarrow \vec{p} = \begin{pmatrix} 3 \\ 2 \\ -1 \end{pmatrix}$ |
|            |   | $\vec{q} = 2\vec{i} + 5\vec{j} + 3\vec{k} \quad \rightarrow \vec{q} = \begin{pmatrix} 2 \\ 5 \\ 3 \end{pmatrix}$ |
| Ditanyakan | : | $\vec{p} \cdot \vec{q} = \dots ?$                                                                                |

|                                                                            |                                                                                                                      |
|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Penyelesaian                                                               | $\vec{p} \cdot \vec{q} = \begin{pmatrix} 3 \\ 2 \\ -1 \end{pmatrix} \cdot \begin{pmatrix} 2 \\ 5 \\ 3 \end{pmatrix}$ |
|                                                                            | $\vec{p} \cdot \vec{q} = (3)(2) + (2)(5) + (-1)(3)$                                                                  |
|                                                                            | $\vec{p} \cdot \vec{q} = 6 + 10 + (-3)$                                                                              |
|                                                                            | $\vec{p} \cdot \vec{q} = 16 - 3$                                                                                     |
|                                                                            | $\vec{p} \cdot \vec{q} = 13$                                                                                         |
| <b>Jadi hasil kali skalar <math>\vec{p} \cdot \vec{q}</math> adalah 13</b> |                                                                                                                      |

### C. LATIHAN SOAL

#### Latihan Soal Tugas 4

1. Diketahui vektor  $\vec{u} = 3\vec{i} - 4\vec{j}$  dan vektor  $\vec{v} = 2\vec{i} + 7\vec{j}$ . Hitunglah hasil kali skalar  $\vec{u} \cdot \vec{v}$  !

Jawab

|            |   |                                                                                                                |
|------------|---|----------------------------------------------------------------------------------------------------------------|
| Diketahui  | : | $\vec{u} = \dots\vec{i} - \dots\vec{j} \rightarrow \vec{u} = \begin{pmatrix} \square \\ \square \end{pmatrix}$ |
|            |   | $\vec{v} = \dots\vec{i} + \dots\vec{j} \rightarrow \vec{v} = \begin{pmatrix} \square \\ \square \end{pmatrix}$ |
| Ditanyakan | : | $\vec{u} \cdot \vec{v} = \dots ?$                                                                              |

|                                                           |                                                                                                                                   |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Penyelesaian                                              | $\vec{u} \cdot \vec{v} = \begin{pmatrix} \square \\ \square \end{pmatrix} \cdot \begin{pmatrix} \square \\ \square \end{pmatrix}$ |
|                                                           | $\vec{u} \cdot \vec{v} = (\dots)(\dots) + (\dots)(\dots)$                                                                         |
|                                                           | $\vec{u} \cdot \vec{v} = \dots + (\dots)$                                                                                         |
|                                                           | $\vec{u} \cdot \vec{v} = \dots \dots \dots$                                                                                       |
|                                                           | $\vec{u} \cdot \vec{v} = \dots$                                                                                                   |
| Jadi hasil kali skalar $\vec{u} \cdot \vec{v}$ adalah ... |                                                                                                                                   |

2. Diketahui vektor  $\vec{p} = 2\vec{i} + 3\vec{j} - 5\vec{k}$  dan vektor  $\vec{q} = 4\vec{i} - 3\vec{j} + \vec{k}$ . Hitunglah hasil kali skalar  $\vec{p} \cdot \vec{q}$  !

|            |   |                                                                                                                                          |
|------------|---|------------------------------------------------------------------------------------------------------------------------------------------|
| Diketahui  | : | $\vec{p} = \dots\vec{i} + \dots\vec{j} - \dots\vec{k} \rightarrow \vec{p} = \begin{pmatrix} \square \\ \square \\ \square \end{pmatrix}$ |
|            |   | $\vec{q} = \dots\vec{i} - \dots\vec{j} + \dots\vec{k} \rightarrow \vec{q} = \begin{pmatrix} \square \\ \square \\ \square \end{pmatrix}$ |
| Ditanyakan | : | $\vec{p} \cdot \vec{q} = \dots ?$                                                                                                        |

|                                                                             |                                                                                                                                             |
|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Penyelesaian                                                                | $\vec{p} \cdot \vec{q} = \begin{pmatrix} \dots \\ \dots \\ \dots \end{pmatrix} \cdot \begin{pmatrix} \dots \\ \dots \\ \dots \end{pmatrix}$ |
|                                                                             | $\vec{p} \cdot \vec{q} = (\dots)(\dots) + (\dots)(\dots) + (\dots)(\dots)$                                                                  |
|                                                                             | $\vec{p} \cdot \vec{q} = \quad (\dots) \quad \dots \quad (\dots) \quad \dots \quad (\dots)$                                                 |
|                                                                             | $\vec{p} \cdot \vec{q} = \quad (\dots) \quad \quad \quad - \quad (\dots)$                                                                   |
|                                                                             | $\vec{p} \cdot \vec{q} = \dots$                                                                                                             |
| <b>Jadi hasil kali skalar <math>\vec{p} \cdot \vec{q}</math> adalah ...</b> |                                                                                                                                             |