



Assumption College Thomburi
Inventive English Program (IEP)
Semester 2, Academic Year 2009 – 2010

Subject: Supplementary English 5 (Mathematics)

Topic: Vectors

Name: _____

Class: Secondary 5/7

Teacher: Mr. Josephil Saraspe

No.: _____ **ID No.:** _____

Worksheet 3: Addition and Subtraction of Vectors

I. If $\mathbf{a} = \begin{bmatrix} 4 \\ 5 \end{bmatrix}$, $\mathbf{b} = \begin{bmatrix} 2 \\ -1 \end{bmatrix}$ and $\mathbf{c} = \begin{bmatrix} 0 \\ -1 \\ 2 \end{bmatrix}$, calculate:

1. $\mathbf{a} + \mathbf{b}$

4. $\mathbf{c} + \mathbf{a}$

2. $\mathbf{b} - \mathbf{a}$

5. $(\mathbf{b} + \mathbf{c}) - \mathbf{a}$

3. $(\mathbf{a} - \mathbf{b}) - \mathbf{c}$

6. $(\mathbf{b} - \mathbf{c}) + \mathbf{a}$

II. If $\mathbf{a} = 2\mathbf{i} + \mathbf{j}$ and $\mathbf{b} = 7\mathbf{i} - 2\mathbf{j}$, calculate:

1. $\mathbf{a} - \mathbf{b}$

3. $\frac{1}{2}(\mathbf{a} + \mathbf{b})$

2. $|\mathbf{a} - \mathbf{b}|$

4. $|\mathbf{b} + \mathbf{a}|$