

TUGAS MATEMATIKA
REPRESENTASI VECTOR DAN KOMPONEN VECTOR



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TI-2D

PROGRAM STUDI TEKNIK INFORMATIKA
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1. Jika $z_1 = 5i - 2j$, $z_2 = 3i + 3j$, $z_3 = 4i - 1j$, tentukan

a) $z_1 + z_2 + z_3 =$

$$z_1 + z_2 + z_3 = (5i + 3i + 4i) + (-2j + 3j - 1j)$$

$$z_1 + z_2 + z_3 = (12i) + (0j)$$

$$\text{Jadi } z_1 + z_2 + z_3 = 12i.$$

b) $z_1 - z_2 - z_3 =$

$$z_1 - z_2 - z_3 = (5i - 3i - 4i) - (-2j - 3j + 1j)$$

$$z_1 - z_2 - z_3 = (-2i) - (-4j)$$

$$z_1 - z_2 - z_3 = -2i + 4j$$

2. Jika $(OA) = 4i + 3j$, $(OB) = 6i - 2j$, $(OC) = 2i - j$, tentukan (AB) , (BC) dan (CA) serta tentukan panjang sisi-sisi segitiga ABC.

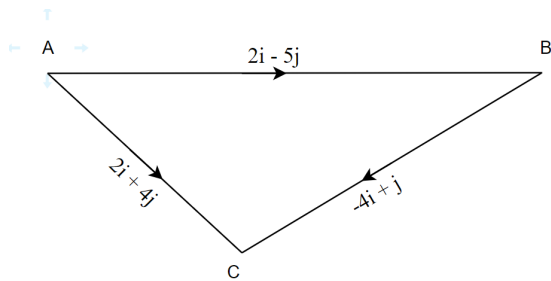
JAWABAN :

$$(AB) = (6i - 2j) - (4i + 3j) = 2i - 5j$$

$$(BC) = (2i - j) - (6i - 2j) = -4i + j$$

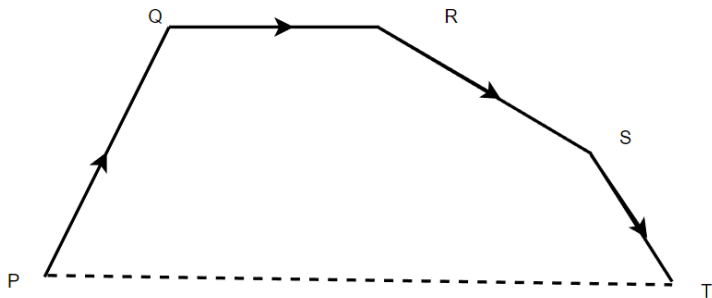
$$(CA) = (2i - 5j) + (-4i + j) = -2i + 4j$$

Gambar segitiga

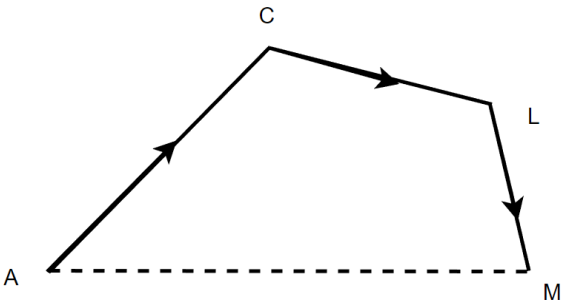


3. Tentukan hasil penjumlahan dari beserta gambarnya

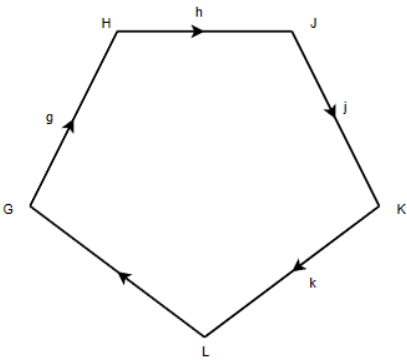
a) $PQ + QR + RS + ST = PT$



b) $AC + CL - ML = AC + CL + LM$



c) $GH + HJ + JK - KL + LG = 0$



d) $AB + BC + CD + DB = 0$

