PEMERINTAH KOTA SEMARANG

DINAS PENDIDIKAN

**SMA NEGERI 14 SEMARANG**

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Mata Pelajaran : Fisika

Materi Pokok : **Penjumlahan Vektor**

Teknik Penilaian : Tes Praktik

Bentuk Instrumen : Tes Simulasi

Tahun Pelajaran : 2018/2019

Nama Peserta : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Kelas/Program : XII IPA \_\_\_

No. Peserta : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hari/Tanggal : \_\_\_\_\_ / \_\_ Jan 2019

Waktu : 120 menit

Nilai :

**NASKAH SOAL UJIAN PRAKTIKUM**

**Rumusan Butir Soal No. 1 :**

Lakukan simulasi percobaan Penjumlahan Vektor untuk menemukan resultan dua buah vektor dalam bentuk rumus cosinus.

1. Tujuan Percobaan

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1. Dasar Teori

Dua buah vektor dapat dijumlahkan atau dikurangkan, dan hasil penjumlahan/ pengurangan ini disebut dengan vektor resultan. Penjumlahan vektor dapat dilakukan dengan metode grafis dan analitis. Penjumlahan vektor secara grafis diantaranya adalah dengan cara segitiga, jajaran genjang dan poligon. Sedangkan dengan cara analitis dengan menggunakan perhitungan, misalnya dengan cara dalil cosinus dan komponen vektor.

1. Alat dan Bahan

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| No. | Nama Alat/Bahan | No. | Nama Alat/Bahan |
| 1.  2.  3.  4.  5. | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 6.  7.  8.  9.  10. | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. Hipotesis

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1. Langkah Percobaan

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1. Data Hasil Percobaan

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Perco-baan Ke- | F1 | F2 | R | α | F12 | F22 | Cosα | 2F1F2  cosα | F12+F22+  2F1F2cosα |
| 1 |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |  |

1. Evaluasi
2. Dari hasil pengukuran, jika nilai F3 (R) dirubah-ubah apakah ada pengaruhnya dengan besar F1, F2 dan sudut α? Jelaskan mengapa.

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1. Berdasarkan data hasil percobaan, adakah kecenderungan membentuk pola tertentu? Tuliskan terdapat pada bagian mana? Dan buatlah formula dalam bentuk persamaan matematis (rumus).

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1. Berdasarkan data hasil percobaan, tentukan arah resultan gaya terhadap F3 untuk tiap-tiap percobaan.

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1. Kesimpulan Percobaan

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