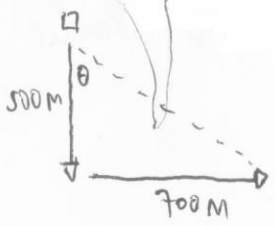
Tutor FMK 1 3/05/21

Soal Latihan

1. diketahui. $S_1 = 500$ m ke selatan
$S_2 = 700$ m ke timur



berapa magnitude dan θ nya.

$$\text{magnitude} = \sqrt{700^2 + 500^2}$$
$$= \sqrt{100^2 (7^2 + 5^2)}$$
$$= 860{,}23 \text{ m}$$

$$\theta = \arctan \frac{700}{500}$$
$$\theta = \arctan \frac{7}{5}$$
$$\theta = 54{,}46^\circ$$

2. A. $7{,}53 + 2{,}4 - 2{,}432 = 9{,}93 - 2{,}432 = 7{,}498$
$\approx 7{,}5$ (2AP)

B. massa = 623,8 kg
$a = 6{,}6 \text{ m/s}^2$

$F = m.a$
$= 623{,}8 \cdot 6{,}6 = 4117{,}08$
$\approx 4{,}1 \cdot 10^3$ N (2 AP)

3. $x_i = 30$ m
$v_s = (10 - 5t)$ m/s

$x = \int (10 - 5t)$

$x = 10t - \frac{5}{2}t^2 + x_i$

$x = 10t - \frac{5}{2}t^2 + 30$

4. $v_0 = 20$ m/s
$a = -10 \text{ m/s}^2$
$v_t = 0$ m/s
Berapa jarak yang ditempuh?

$v_t^2 = v_0^2 + 2as$
$0^2 = 20^2 + 2 \cdot (-10) \cdot s$
$0 = 400 + (-20) \cdot s$
$20s = 400$
$s = 20$ m