

Physics 1214, Homework #3: solutions

Answers to multiple choice questions: M1: B; M2: B, C.

P1: 490 N

P2: (a) $\theta = 30^\circ$

$$(b) \mu_k = 1 - \frac{1}{\sqrt{2}} = 0.293$$

$$P3: \mu_k = \frac{F \cos \theta}{mg - F \sin \theta}$$

(no numerical value since the magnitude of \mathbf{F} was not provided)

P4: $\mathbf{a} = (2\mathbf{i} + 1.5\mathbf{j}) \text{ m/s}^2$ $|\mathbf{a}| = 2.5 \text{ m/s}^2$ $\theta = 36.9^\circ$