

力

Sec. 1

1. 1 m/s^2 沿斜面
2. (a) 向右
(b) 向左
(c) 無作用力
3. (a) 向右，向左，向右
(b) 無向，向左，向右

Sec. 2

1. $\frac{1}{6}\text{m}$, 0.1m
2. $\frac{1}{7}\text{R}$, $\frac{1}{9}\text{R}$

Sec.3

1. 53°
2. $\frac{\sqrt{3}}{5}$
3. (a) 0.4 m/s^2
(b) 1.2m/s
4. 20m/s 向右上與水平夾角為 53°
5. $0.75L$

Sec. 4

1. (a) $1.25w$ 向右上與水平夾 53°
(b) $0.75w$ 水平向右
(c) $2w$ 垂直向下
2. 45°
3. 50cm
4. (a) 72kgw
(b) 48kgw
5. 8N
6. 1

Sec. 5

1. $50\sqrt{2}$ Nm
2. C
3. (a) 0.0015Nm
(b) 0.025N

Sec.6

1. 0.3
2. (a) 2
(b) $15\sqrt{5}$ N
3. (a) 10N
(b) 2.8

Sec. 7

1. 0.05m , 0.015m
2. 0.4π s
3. $a_A = 70\text{m/s}^2$ 向下 , $a_B = 0 \text{ m/s}^2$, $a_C = 0 \text{ m/s}^2$
4. (a) 14cm
(b) 15cm

Sec. 8

1. (a) 300N , $T_1 = 100\text{N}$, $T_2 = 250\text{N}$, $a = \frac{5}{6} \text{ m/s}^2$ 向右
(b) $a = 1.5 \text{ m/s}^2$ 向右 , $T_1 = 130\text{N}$, $T_2 = 165\text{N}$
(c) $m_{20} : 50\text{N}$ 向右 $m_{30} : 50\text{N}$ 向左 $m_{10} : 50\text{N}$ 向左 $T_1 = 0\text{N}$ (無張力) $T_2 = 50\text{N}$
(d) $m_{20} : 0\text{N}$ (無摩擦) $m_{30} : 150\text{N}$ 向左 $m_{10} : 50\text{N}$ 向左 $T_1 = 200\text{N}$ $T_2 = 350\text{N}$
2. (a) 600N , $a = 28 \text{ m/s}^2$ 向左
3. (a) $a_{\text{大}} = 1 \text{ m/s}^2$ 向右 , $a_{\text{小}} = 1 \text{ m/s}^2$ 向右
(b) $a_{\text{大}} = 5.2 \text{ m/s}^2$ 向右 , $a_{\text{小}} = 5 \text{ m/s}^2$ 向右 , 1 秒
(c) $a_{\text{大}} = 6.2 \text{ m/s}^2$ 向右
4. $H_{\text{max}} = R(1 - \frac{1}{\sqrt{u^2 + 1}})$

Sec.9

1. 120N , 60kg
2. 10N

Sec. 10

1. 726N
2. (a)0.1rad/s
(b)0Nm
(c)略

Sec.11

1. 36km/h

Sec. 12

1. (a) 8m/s
(b) 8s
(c)64m
2. $\frac{3}{10}mv$, $\frac{\sqrt{73}}{10}mv$, $0.96\frac{v^2}{g}$

Sec. 13

1. 38.4kgw
2. 2m/s
3. 4 m/s²
4. 9rad/s