

107 學年度教師甄選物理試題

答案卷

每格 5 分，共 100 分

1	$2H + \frac{R^2}{8H}$	5 (1)	$-m_1 g \sin \theta + 2m_2 g \sin \frac{\theta}{2}$	8	3	10(1)	$-\frac{7GMm}{8R}$
2	5	5 (2)	$v_2 = v_1 \cos \frac{\theta}{2}$	9 (1)	$-\frac{mgh}{RT_0}$	10(2)	$\frac{1}{2} \sqrt{GM R}$
3	1 : 4	5 (3)	$\frac{m_2}{m_1}$	9 (2) a	9T ₀	10(3)	$\frac{7}{2} \sqrt{\frac{GM}{R}}$
4 (1)	$\frac{100\pi^2 a}{b^2}$	6	80	9 (2) b	$\frac{mgh}{4RT_0}$	10(4)	$\frac{8\pi R}{7} \sqrt{\frac{4R}{7GM}}$
4 (2)	$\frac{375\pi}{Gb^2}$	7	8	9 (3)	3mgh	11	$3 \sqrt{\frac{L}{g}}$