

HKDSE Essentials: Physics Exam Exercises

Force and Motion, 1/e

Updated on 2012-09-19

Amendments (main book):

F1 p.14 #7b	landing velocity v
F2 p.27 ans #4	A
F2 p.37 ans #8b	443 N
F2 p.38 ans #2c	0.58 m
F2 p.39 ans #5b	0.0472 N
F3 p.45 ans #2b	(0 N, -7 N)
F3 p.50 ans #19	B
F3 p.51 #22 option	D. $150 \cos 50^\circ \sin 50^\circ$ N
F5 p.85 ans #1c(ii)	air resistance & lifting force
F6 p.94 #17 options	A. 0.75 s; B. 1.02 s; C. 1.77 s; D. 3.21 s
F6 p.94 ans #17	A
F7 p.106 #14 option	B. 70.9°
F7 p.109 ans #7b	6300 m
F8 p.116 #3	$G = 6.67 \times 10^{-11} \text{ N m}^2 \text{ kg}^{-2}$
F10 p.144 ans #6b	4:1; 29.5 m s^{-1} ; 591 rad s^{-1}

Amendments (solution guide):

F2 p.7 #4	The answer should be A.
F2 p.12 #3b(ii) tip	1200 should read 12 000, i.e. the mass of the helicopter. And f should read F , i.e. the lifting force.
F2 p.13 #5b	$F = ma$ should read $F - mg = ma$. So, $F = 0.0472$ N.
F3 p.15 #8	$x_A = \sqrt{1^2 - 0.6^2}$ and $x_B = \sqrt{2^2 - 0.6^2}$.
F3 p.16 #20	The friction should be $F \sin 50^\circ$.
F3 p.19 #8a fig.	The supporting force should point left.
F3 p.22 #11a	$m_1 + m_2$ is equal to 3 kg, not 3.
F5 p.29 #7	The force should point backwards.
F5 p.30 #16	The answer should be A.
F5 p.31 #33 fig.	Both angles should be $\theta/2$.
F6 p.38 #17	The answer should be A. In the last equation, 20 should read $20 \sin 60^\circ$. So, $t \approx 0.75$ s or 2.79 s.
F6 p.40 #3b	14.14 s should read 14.15 s.
F6 p.41 #1b	min. u should read u .
F7 p.44 #4	The answer should be D.
F7 p.44 #14	The answer should be 70.9° .
F7 p.46 #7b	The answer should be 6300 m.
F9 p.59 #8 fig.	The y -axis should read f / N, and 2 should read 10. For x -axis, 5 and 10 should read 1 and 4 respectively.