ADVANCED PLACEMENT PHYSICS MECHANICS TABLE OF INFORMATION

CONSTANTS AND CONVERSION FACTORS
Universal gravitational constant, $G = 6.67 \times 10^{-11} \ \mathrm{m^3/(kg \cdot s^2)} = 6.67 \times 10^{-11} \ \mathrm{N \cdot m^2/kg^2}$
Acceleration due to gravity at Earth's surface, $g = 9.8 \ \mathrm{m/s^2}$
Magnitude of the gravitational field strength at the Earth's surface, $g = 9.8 \ \mathrm{N/kg}$

PREFIXES		
Factor	Prefix	Symbol
10^{12}	tera	T
10^{9}	giga	G
10^{6}	mega	M
10^{3}	kilo	k
10^{-2}	centi	c
10^{-3}	milli	m
10^{-6}	micro	μ
10^{-9}	nano	n
10^{-12}	pico	p

UNIT SYMBOLS	hertz,	Hz	newton,	N
	joule,	J	second,	s
	kilogram,	kg	watt,	W
	meter,	m		

VALUES OF TRIGONOMETRIC FUNCTIONS FOR COMMON ANGLES							
θ	0°	30°	37°	45°	53°	60°	90°
$\sin\theta$	0	1/2	3/5	$\sqrt{2}/2$	4/5	$\sqrt{3}/2$	1
$\cos\theta$	1	$\sqrt{3}/2$	4/5	$\sqrt{2}/2$	3/5	1/2	0
$\tan\theta$	0	$\sqrt{3}/3$	3/4	1	4/3	$\sqrt{3}$	∞

The following assumptions are used in this exam.
- The frame of reference of any problem is assumed to be inertial unless otherwise stated.
- Air resistance is assumed to be negligible unless otherwise stated.
- Springs and strings are assumed to be ideal unless otherwise stated.