

# Physics MidTerm Exam - Dec 2004 - Topics

Some of these are redundant

2003

2-Body tension - equilibrium with friction	in Dec exam
2-Body tension - equilibrium without friction - LAB	in Dec exam
2-Body tension acceleration on an incline with friction	in Dec exam
Acceleration from slope of a velocity vs time graph	in Dec exam
Ballistic pendulum	in Dec exam
Beam problem - no rotation - LAB	in Dec exam
Beam Problem - torque not equal to zero	in Dec exam
Center of Mass	in Dec exam
Conservation of Energy - falling object	in Dec exam
Conservation of Energy - sliding down a ramp	in Dec exam
Conservation of momentum - canons and collisions - LAB	in Dec exam
Constant acceleration graphs - LABS	in Dec exam
Density	in Dec exam
Derivative - position equation to velocity equation - LABS	in Dec exam
Elevator problem	in Dec exam
Equations of circular motion - constant angular acceleration	in Dec exam
Equations of linear motion - constant acceleration	in Dec exam
Free-body diagrams - LABS	in Dec exam
Frequency, wavelength and the speed of light	in Dec exam
Friction - $F_f = \mu_k F_N$ ; $F_f = \mu_s F_N$	in Dec exam
Gravitational force - $F = mg$ <u>and</u> Universal Law of Gravitation	in Dec exam
Gravitational potential energy	in Dec exam
Impulse: Momentum equation - collisions - LAB	in Dec exam
Linear motion - speed and velocity - Averages	in Dec exam
Motion equations - LABS	in Dec exam
Motion equations graphs of constant acceleration equations	in Dec exam
Newton's 2nd Law - sliding block with horizontal force & friction	in Dec exam
Newton's 2nd Law - sliding block with horizontal force, no friction	in Dec exam
Newton's 2nd Law - sliding block with inclined force & friction	in Dec exam
Newton's 2nd Law - sliding block with inclined force, no friction	in Dec exam
Newton's 2nd Law with friction	in Dec exam
Normal Force - apparant weight	in Dec exam
Pascal's Principle	in Dec exam
Position equation - LABS	in Dec exam

<b>Pressure</b>	in Dec exam
<b>Pulley problems</b>	in Dec exam
<b>Radian measure - <math>s = r\theta</math> ; <math>v = r\omega</math> ; <math>a = r\alpha</math></b>	in Dec exam
<b>Rolling without slipping - <math>\omega = v/r</math></b>	in Dec exam
<b>Significant figures</b>	in Dec exam
<b>Snell's Law - index of refraction, speed of light</b>	in Dec exam
<b>Temperature conversions - Not Fahrenheit</b>	in Dec exam
<b>Tension</b>	in Dec exam
<b>Torque - several forces - LAB</b>	in Dec exam
<b>Torque - single force</b>	in Dec exam
<b>Uniformly accelerated motion</b>	in Dec exam
<b>Unit conversions</b>	in Dec exam
<b><math>v = r\omega</math> - linear velocity = radius x angular velocity</b>	in Dec exam
<b><math>v^2 = v_0^2 + 2a(x - x_0)</math> - LAB</b>	in Dec exam
<b>Vector components</b>	in Dec exam
<b>Vector conversion - Polar to Rectangular</b>	in Dec exam
<b>Vector conversion - Rectangular to Polar</b>	in Dec exam
<b>Vector equations - Vector triangle - LAB</b>	in Dec exam
<b>Velocity equation - LABS</b>	in Dec exam
<b>Velocity from slope of a position vs time graph - LAB</b>	in Dec exam
<b>Vertical Motion equations - LAB</b>	in Dec exam
<b><math>\omega = v/r</math> - angular velocity = linear velocity / radius</b>	in Dec exam
<b>Work, power and energy and Efficiency</b>	in Dec exam
<b>Ideal gas law</b>	in Dec exam
<b>Integrals - area under a curve</b>	in Dec exam