

Name \_\_\_\_\_ Block \_\_\_\_\_ Date \_\_\_\_\_

## Ch 5 Newton's 2nd Law Study Guide

Mrs. Peck

### Objectives:

State the relationship between acceleration and net force. Know the SI units and the other units. (5.1)

State the relationship between acceleration and mass. Know the SI units and the other units. (5.2)

State Newton's 2nd Law of Motion and explain it using a "numeric" example. (5.3)

Describe the effect of friction on stationary and on moving objects. (5.4)

Distinguish between force and pressure. Know their SI & other units of measurement. (5.5)

Using the metric system, convert mass given in grams to kilograms and vice versa. (4.6)

### Vocabulary:

air resistance	pressure	Newton's 2nd Law	pascal
inversely	fluid	free-body diagram	rolling friction
static friction	fluid friction	kinetic/ sliding friction	coefficient of friction
friction			

	symbol	SI unit	other unit(s)
force	F	N newton	kg m/ s <sup>2</sup>
acceleration	a	m/ s <sup>2</sup>	
friction	f	N newton	kg m/ s <sup>2</sup>
pressure	P	Pa pascal	N/ m <sup>2</sup>
area	A	m <sup>2</sup>	
coefficient of friction	μ		

### Formulas:

$F = ma$        $a = \frac{F}{m}$        $w = mg$        $F_f = \mu F_n$        $A = \pi r^2$        $P = \frac{F}{A}$

**Text:** Quiz 8.1-8.6 Test 8.1-8.9

**Yellow Questions** pp 63,64,66

**Figures:** fig. 5.5, 5.6, 5.7, 5.8

**Text Ch. Review Questions #** 1-11, 19-22, 24-25, 28-30, 35-39

**Problem Solving Book** review pp 29, 35, 44

**Problem Solving Book Solved Problems #** 1-3, 6, 7, 13, 14

**Problem Solving Book Practice Exercises #** 1-4, 7, 8, 10, 11, 18-21

**Physics Classroom Website:** [www.physicsclassroom.com](http://www.physicsclassroom.com)      tutorial--newtons laws

**Concept Development Practice Worksheet 5-1**