

## Chapter 3 Reading Guide

### AP Physics B

#### **3-1** Vectors and Scalars

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What is the difference between a vector and a scalar?

Name some examples of each.

#### **3-2** Addition of Vectors—Graphical Methods

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Describe and diagram how you would add vectors graphically.

What is vector notation?

#### **3-3** Subtraction of Vectors, and Multiplication of a Vector by a Scalar

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How do you subtract vectors?

How do you multiply a vector by a scalar quantity? What is the result?

## **3-4** Adding Vectors by Components

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What are components?

How do you resolve a vector into components?

What trigonometric functions are necessary?

What problem solving techniques are used for adding vectors?

Sample Problems

### **3-5** Projectile Motion

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Describe projectile motion.

### **3-6** Solving Problems Involving Projectile Motion

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Key Equations:

Problem Solving Techniques:

Sample Problems

### **3-7** Projectile Motion is Parabolic

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Why can you describe the path of a projectile as parabolic?

Show  $y$  (the vertical position) as a function of  $x$  (the horizontal position).

### **3-8** Relative Velocity

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What does relative velocity refer to?

Why is drawing a diagram so important?

How do you remember which vectors to add?

Sample Problems