

Study Guide Holt Physics Chapter 3—Two-dimensional Motion and Vectors

I. Section 3-1—Introduction to Vectors

A. Scalars and Vectors

1. Magnitude and Direction

- In chapter 2 we discussed velocity. Velocity has both a magnitude and a direction.
- Magnitude**: a measurement represented by a number (e.g. -12 meters/second)
- Direction**: an indication of orientation. For velocities we use a positive number for right or up and a negative number for left or down.

2. Velocity is an example of a **VECTOR**. Vectors always have both a direction and a magnitude

- Vectors are differentiated from scalars in your book by using **BOLD** type.
- Vectors are also represented by arrows. The longer the arrow the more magnitude the vector has.

3. Speed is an example of a **SCALAR**. Scalars only have a magnitude.

B. Properties of vectors

1. Vectors can be added graphically

- When adding vectors, you must make sure that they have the same units and describe similar quantities.
- The answer found by adding vectors together is called the **resultant**.



Figure 3(a)



Figure 3(b)

- Vectors can only be moved parallel to themselves in a diagram. (see fig 3.3 on p.86)

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CL Gary



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Holt Physics Raymond A. Serway, 2002 Holt Physics Holt Rinehart & Winston, Holt, Rinehart and Winston Staff, 1998-03 Books in Print Supplement, 2002 **Children's Books in Print, 2007**, 2006 *Solid State Physics* Gerald Burns, 2013-11-06 *Solid State Physics International Edition* covers the fundamentals and the advanced concepts of solid state physics The book is comprised of 18 chapters that tackle a specific aspect of solid state physics Chapters 1 to 3 discuss the symmetry aspects of crystalline solids while Chapter 4 covers the application of X rays in solid state science Chapter 5 deals with the anisotropic character of crystals Chapters 6 to 8 talk about the five common types of bonding in solids while Chapters 9 and 10 cover the free electron theory and band theory Chapters 11 and 12 discuss the effects of movement of atoms and Chapter 13 talks about the optical properties of crystals Chapters 14 to 18 cover the other relevant areas of solid state physics such as ferroelectricity magnetism surface science and artificial structure The book will be of great use both to novice and experienced researchers in the field of solid state physics **Library of Congress Catalog: Motion Pictures and Filmstrips** Library of Congress, 1968 *The Project Physics Course: Reader* Harvard Project Physics, 1970 **Suggested Books for Indian Schools; an Annotated List Which Includes Library Books, Recommended Textbooks, Reference Material, and Maps, Selected with Special Reference to the Interests and Activities of Rural Communities** United States. Bureau of Indian Affairs, 1965 The Chemical Trade Journal and Oil, Paint and Colour Review, 1904 The United States Catalog, 1906 **The United States Catalog; Books in Print January 1, 1912** Marion Effie Potter, 1921 **The United States Catalog Supplement, January 1918-June 1921** Eleanor E. Hawkins, 1921 *Suggested Books for Indian Schools* United States. Bureau of Indian Affairs, 1965 **The Chemical News and Journal of Physical Science**, 1773 **The United States Catalog** Eleanor E. Hawkins, 1921 *School Science and Mathematics*, 1928 ENC Focus, 2000 *Handbook of Research on Adult Learning and Development* M Cecil Smith, Nancy DeFrates-Densch, Assistant Editor, 2008-11-19 The time is right for this comprehensive state of the art Handbook that analyzes integrates and summarizes theoretical advances and research findings on adult development and learning a rapidly growing field reflecting demographic shifts toward an aging population in Western societies Featuring contributions from prominent scholars across diverse disciplinary fields education developmental psychology public policy gerontology neurology public health sociology family studies and adult education the volume is organized around six themes theoretical perspectives on adult development and learning research methods in adult development research on adult development research on adult learning aging and gerontological research policy perspectives on aging The Handbook is an essential reference for researchers faculty graduate students and practitioners whose work pertains to adult and lifespan development and learning Catalog of Copyright Entries. Third Series Library of Congress. Copyright Office, 1976 **Publishers' Weekly**, 1876

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