Section 1: Terminology
- Square roots
- Higher order roots

Be Able To
- Find square roots
- Find higher order roots
- Approximate roots
- Applying the concepts

Section 2: Omitted

Section 3: Terminology
- Rational Exponents

Be Able To
- Simplify expressions with rational exponents

Section 4: Omitted

Section 5: Omitted

Section 6: Terminology
- No additional definitions

Be Able To
- Use radicals in applications

Section 7: Terminology
- No additional definitions

Be Able To
- Graph of basic Rational Function $y = \sqrt{x}$ and state the domain
- Apply the concepts

Section 8: Omitted

Sample Applications of Chapter 8 Content
- Use a given formula to calculate animal heart rate

Example: $N(w) = Kw^{\frac{1}{2}}$ where $N(w)$ is the heart rate, $w$ is the weight of the animal in pounds, and $K$ is a constant

- Use a given formula to calculate an interest rate

Example: $r = \left(\frac{A}{P}\right)^{\frac{1}{t}} - 1$ where $r$ is the annual interest rate, $P$ is the amount invested, $A$ is the amount you want the investment to grow to, and $t$ the time in years. This formula assumes the interest is compounded annually.

- Use a given formula to calculate diagonal distance
• Use a given formula to calculate distance to the horizon

   Example:  \( d = \sqrt{8000k + k^2} \) where \( d \) is the distance you can see, \( k \) is your height above the earth’s surface

• Use a given formula to calculate the radius of a sphere