

1. **7.1** Simplify  $-\sqrt{9}$
  
2. **7.1** Use a calculator to approximate  $\sqrt{11}$  to 3 decimal places. Check your answer by squaring.
  
3. **7.1** Find the cube root:  $\sqrt[3]{\frac{27}{64}}$
  
4. **7.1** Find the 4<sup>th</sup> root:  $\sqrt[4]{81x^4}$
  
5. **7.7** Write in terms of  $i$  :  $4\sqrt{-20}$
  
6. **7.7** Multiply. Simplify as much as possible.  $\sqrt{-2} \cdot \sqrt{-6}$
  
7. **8.1** Solve each equation. Your book *says* use the square root property, but *I* want you to show a step involving an absolute value, until your *heart* knows where that  $\pm$  comes from!
  - a.  $x^2 - 11 = 0$
  - b.  $(y - 3)^2 = 4$

c.  $x^2 + 4 = 0$

d.  $(y + 2)^2 = -25$

Added Problems not in your book:

8. Solve the equations by the square root principle. Simplify your answer as much as possible *without using a calculator*. I'm not looking for decimal answers – just simplified radicals, as needed.

a.  $(x + 5)^2 = 72$

b.  $(2x - 3)^2 = -150$

9. Simplify the expressions:

a.  $\frac{2 - \sqrt{48}}{4}$

b.  $\frac{4 - \sqrt{48}}{2}$

c.  $\frac{4 - \sqrt{-48}}{2}$