

Math 06, Homework 2 on Sections 7.4, 7.5, 7.6
due Thur, Feb 14 at the start of class.

These first ten questions are 3 points each. Write your work on a separate sheet. It is very important that you show clearly any work you had to do to get the answer.

(7.4) Q1. Solve: $\sqrt{x} = 9$ **(7.4) Q2.** Solve: $\sqrt{3x+3} - 6 = 0$

(7.4) Q3. Solve: $\sqrt{48-2x} = x$ **(7.5) Q4.** Write this expression in radical form: $x^{3/4}$

(7.5) Q5. Find: $1000^{1/3}$ **(7.5) Q6.** Find: $(-32)^{-2/5}$

(7.5) Q7. Simplify: $\frac{(x^2y^{1/3})^3}{x^5}$

(7.6) Q8. Simplify and write as a multiple of i : $\sqrt{-400}$

(7.6) Q9. Multiply and write in standard form: $(1-2i)(3+4i)$

(7.6) Q10. Divide and write in standard form: $\frac{2i}{7+i}$

These next ten questions from the book are 1 point each. Show clearly all your working out and reasoning. Check your answers match the ones in the book at the end of the section.

1. **Q5, p. 762.** Solve: $\sqrt{m+5} = 3$
2. **Q15, p. 762.** Solve: $\sqrt{2x-3} + 1 = 3$
3. **Q33, p. 763.** Solve: $\sqrt{2x} = \sqrt{x+1}$
4. **Q41, p. 763.** Solve: $\sqrt{x+1} + \sqrt{x} = 1$
5. **Q15, p. 775.** Evaluate: $(-8)^{4/3}$
6. **Q37, p. 776.** Simplify: $b^{2/3} \cdot b^{3/2}$
7. **Q57, p. 776.** Simplify: $(8p^{3/2} \cdot q^{5/2})^{2/3}$
8. **Q15, p. 788.** Evaluate: $(5+4i) - (3+2i)$
9. **Q59, p. 790.** Divide and write in standard form: $\frac{2+3i}{4+3i}$
10. **Q81, p. 791.** Simplify: i^{38}