

Math 06, Homework 1 on Sections 7.1, 7.2, 7.3
due Tue, Feb 5 at the start of class.

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

(7.1) Q1. Find: $\sqrt{400}$ (7.1) Q2. What is: $\sqrt[3]{-8}$ (7.1) Q3. Find: $-\sqrt[4]{625}$

(7.1) Q4. Find the distance between the points $(-3, 2)$ and $(2, 6)$

(7.2) Q5. Simplify: $\sqrt{200}$ (7.2) Q6. Assume x is positive and simplify: $\sqrt{45x^2}$

(7.2) Q7. Assume w is positive and simplify: $\sqrt{\frac{50w^4}{9}}$

(7.3) Q8. Simplify and add: $2\sqrt{40} + \sqrt{90}$

(7.3) Q9. Multiply and simplify: $\sqrt{3}(\sqrt{5} + \sqrt{3} - 7)$

(7.3) Q10. Rationalize the denominator and simplify: $\frac{2}{3 - \sqrt{2}}$

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

1. Q35, p. 724. Find: $\sqrt[4]{3^4}$
2. Q47, p. 724. In a right triangle with legs of length 9, 12, find the length of the hypotenuse.
3. Q77, p. 726. Calculate $\sqrt{156}$ correct to 3 places.
4. Q15, p. 737. Simplify: $\sqrt[3]{-48}$
5. Q25, p. 737. Assume m is positive and simplify: $\sqrt{98m^3}$
6. Q41, p. 738. Simplify: $\sqrt{\frac{5}{16}}$
7. Q53, p. 738. Simplify: $\frac{7}{\sqrt{12}}$
8. Q19, p. 751. Simplify and subtract: $\sqrt{54w} - \sqrt{24w}$
9. Q56, p. 752. Multiply and simplify: $(\sqrt{6} - 2\sqrt{3})(\sqrt{6} - 3\sqrt{3})$
10. Q79, p. 753. Simplify: $\frac{\sqrt{w} + 3}{\sqrt{w} - 3}$