

Math-08 Homework #6

Reading

- Text book section 1.1, 1.3, 1.4

Problems

- 1). Determine if and explain why each of the following statements is either correct or incorrect (or misleading).
 - a). $\sqrt{9} = 3$
 - b). $\sqrt{9} = \pm 3$
 - c). $\left(x^{\frac{1}{2}}\right)^2 = |x|$
 - d). $\left(x^{\frac{1}{2}}\right)^2 = x$
 - e). $(x^2)^{\frac{1}{2}} = x$
 - f). $(x^2)^{\frac{1}{2}} = |x|$
 - g). $(x^3)^{\frac{1}{3}} = |x|$
 - h). $(x^3)^{\frac{1}{3}} = x$
- 2). Consider the quadratic equation: $2x^2 + x - 6 = 0$
 - a). Solve using factor by inspection.
 - b). Solve by manually completing the square.
 - c). Solve using the quadratic formula.
 - d). Show how the answers from the quadratic formula can be used to come up with a factoring of the LHS of the original equation.