

- 1.) A word problem on quadratic equations. (Reference: Example 11 on page 105; suggested homework **on word problems** from Section 1.3.)
- 2.) (i) Complete the square in a quadratic function  $f(x)$ ; (ii) After completing the square, use transformations to graph  $f(x)$  starting from the simple graph of  $x^2$ . (Reference: Example 1 on pages 295–296.)
- 3.) (i) Perform composition of functions; (ii) Identify the “inside” and “outside” of a composite function. (Reference: Example 2 on page 403; Example 6 on page 406.)
- 4.) Find the inverse of a one-to-one function. (Reference: Example 9 on page 417.)
- 5.) Solve a polynomial (or rational) inequality. (Reference: Examples 1, 3, 4 on pages 370–372.)
- 6.) (i) Expand and condense logarithmic expressions; (ii) Use change-of-base formula to compute logarithms. (Reference: Examples 3, 4, 5, 6, and 8 on pages 452–456.)
- 7.) Solve an exponential equation. (Reference: Examples 4, 5, 6 on pages 461–462.)
- 8.) Find the domain of a logarithmic function. (Reference: Example 5 on page 439.)
- 9.) A word problem on compound interest formula (discrete or continuous) or other exponential growth/decay models. This question will require solving exponential equations. (Reference: Example 7 on page 471; Examples 1, 2 and 3 on pages 476–479.)
- 10.) A word problem on linear equations. (Reference: Example 4 on page 142.)