Algebra 2 **Name:**_____

Review for Unit 2 Test

Print

1. Identify the transformations needed to graph the given function from its parent function.
   $f(x) = -(3-2x)^2+6$

2. Write each in standard form.
   a. $\left(3+\sqrt{-64}\right)-\left(5+3i^{79}\right)$ b. $\dfrac{3-i}{5+2i}$

3. Consider the function $f(x) = -2(x+4)(x-2)$.
   a. Does f have a maximum or minimum? Find its value.
   b. Solve: $-2(x+4)(x-2)>0$.

4. Solve the following. If a quadratic is not factorable, use the completing the square method.
   a. $2x^2-5x>12$

   b. $2x^2+24=4-8x$

   c. $6x^2+3x=x+20$

   d. $\begin{cases} y=x^2-5x+4 \\ 2x-3y=8 \end{cases}$

5. Consider the quadratic function $f(x)$ that passes through (1,-4), (5,-4), and (-1,-28).
   a. Find the equation for $f(x)$.

   b. Does the function have a maximum or minimum value? Explain you answer and find the value.

   c. Determine the values of x for which $f(x) \geq 0$.

6. Determine the value(s) of k for which $x^2+k+2=2kx$ will have imaginary solutions.