Group Quiz 12 Chapter 7

1. Solve the following. Write your answers in exact form.

   (a) $7(2x+1)^2+4=39$

   (b) $(5x-1)^2=4$

2. Find the vertex, y-intercept and x-intercepts of $f(x)=3(x-2)^2-4$, then sketch the graph

3. Solve the following by factoring the Left Hand Side of the equation first (instead of getting a zero on the RHS first), then continue until you can take the square root of both sides to find the x-values that work.

   (a) $x^2 + 10x + 25 = 16$

   (b) $x^2 - 6x + 9 = 10$

   (c) $3x^2 - 12x + 12 = 27$

   (d) $2x^2 + 4x + 2 = 0$

   (e) $x^2 - 12x + 36 = -5$

4. The following quadratic polynomials are all in the form $x^2 + bx + c$, where c is unknown but b is given. Find the value of c so that the polynomial is a perfect square trinomial.

   (a) $x^2 - 10x + c$

   (b) $x^2 + 6x + c$

   (c) $x^2 + 4x + c$

   (d) $x^2 + 3x + c$

   (e) $x^2 - x + c$