GSE Algebra 1 **HW #8.7** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Put the following into vertex form. Tell what the vertex is. Then tell if it is a min or a max.

1. $y=x^{2}-4x+10$ 2) $y=4x^{2}+16x-2$
2. $y=-x^{2}-6x-1$ 4) $y=\frac{1}{2}x^{2}+4x-3$
3. $y=-3x^{2}+9x+3$ 6) $y=6x^{2}+12x-4$

Complete the square to solve for x. (you do the ENTIRE thing here).

1. $x^{2}-4x+12=0$ 8) $9x^{2}-81x=12$
2. $5x^{2}-25x-3=0$ 10) $9x^{2}+54x+45=0$

Factor the following. Be sure you watch for GCF’s.

1. $4x^{2}-16$ 12) $4x^{2}-4x-3$ 13) $9x^{2}+24x+16$