Use these questions to lead you working out the problem:

- what form do you need the quadratic function to be in, so that you could easily find the line of symmetry?
- after you put the quadratic function into the above form, how do you find the line of symmetry?
- how do you find if the quadratic function has a highest or lowest point? what are the x- and y-coordinate of the highest or lowest point?
- how do you find the y-intercept of the quadratic function? does it exist for all quadratic function?
- how do you find the x-intercept(s) of the quadratic function?

Use the above questions to lead your way in order to solve these questions:

1. $y = x^2 + 2x + 1$
2. $y = -x^2 + 2x - 1$
3. $y = -x^2 + 2x + 1$
4. $y = 2x^2 + 2x - 1$
5. $y = -2x^2 + 2x - 1$
6. $y = -\frac{1}{2}x^2 + 2x - 1$
7. $y = -x^2 + 1$