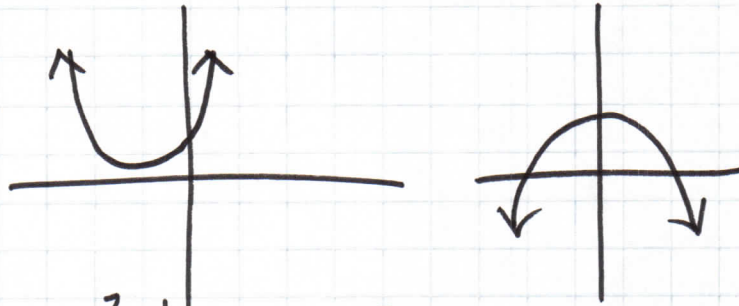


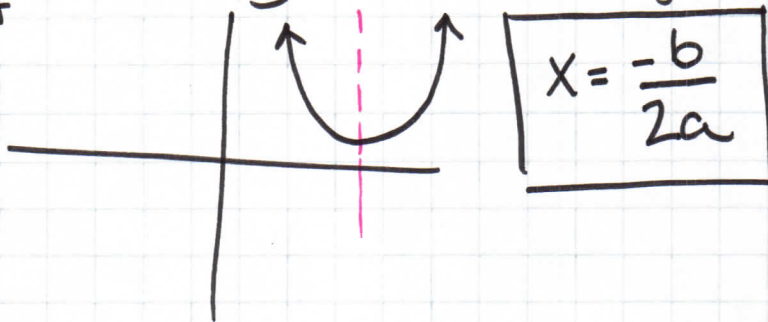
Section 9.1 and 9.2

Parabola

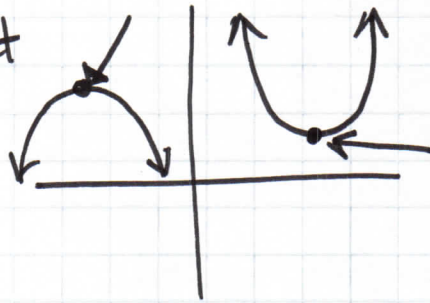


Quadratic $ax^2 + bx + c = 0$

1. axis of symmetry - line cutting the graph in half



2. Vertex - starting point

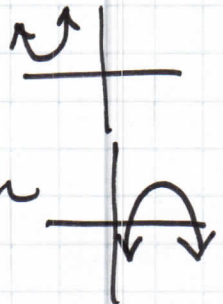


3. Opens up/Down

$ax^2 + bx + c = 0$

↑
If a is positive opens up

If a is Negative open down

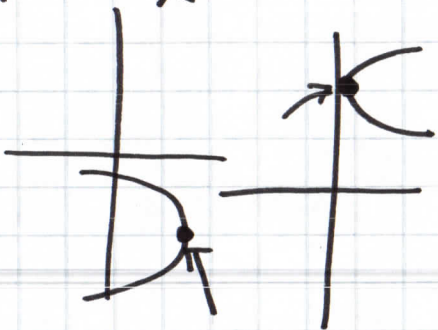


④ Max or min

$$ax^2 + bx + c = 0$$

If a is positive Min

If a is negative Max



⑤ Domain all the x values

Domain will always be all reals.

$$(-\infty, \infty)$$

⑥ Range Y -values

if a is pos $Y \geq$ (vertex value)

if a is Neg $Y \leq$ (vertex value)