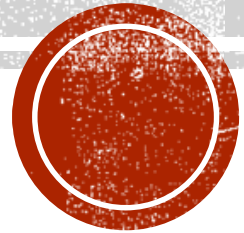
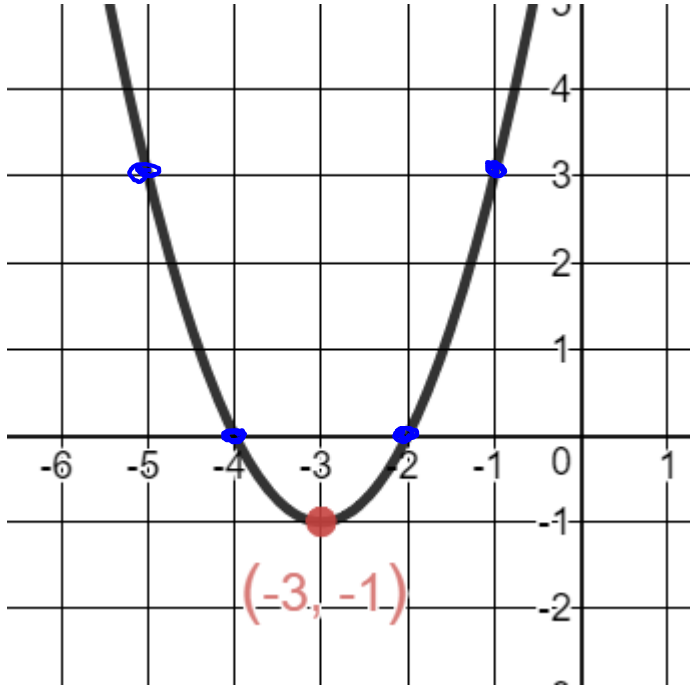
2.1 NOTES

Vertex, line of symmetry, vertex form of a quadratic, simplifying square roots



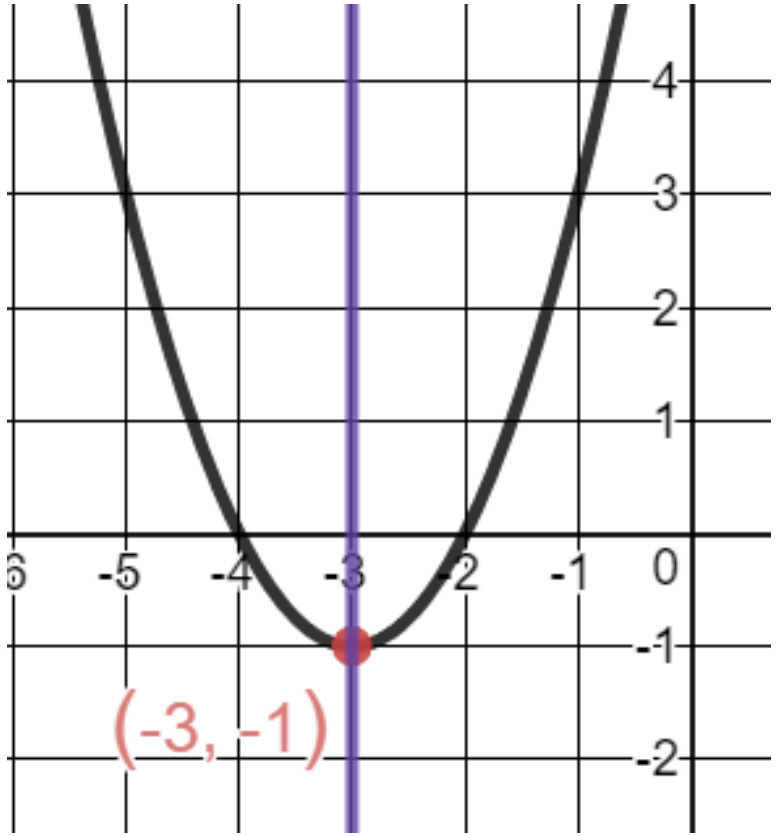
VERTEX OF A PARABOLA

- Is an ordered pair (x, y), where the parabola is either at a maximum or a minimum.



LINE OF SYMMETRY OF A PARABOLA

- The line of symmetry of a parabola cuts the parabola in half through the vertex.
- It is written as x = a number.
- Example: x = -3



VERTEX FORM

- $f\ (x)\ =\ a(x\ -h)^2\ +\ k$, where (h, k) is the **vertex** of the parabola.

SIMPLIFY SQUARE ROOTS

- Rewrite expression as a list of prime factorization and variables.
- Circle pairs.
- Move to the outside of the radical (square root sign)
- Leave any non-paired numbers or variables on the inside of the radical.

Examples:

1. $\sqrt{49x^2y^{20}}$

2. $\sqrt{48x^3y^4}$