References

[Bou07] N. Bourbaki. *Groupes et algèbres de Lie: Chapitres 4, 5 et 6*. Bourbaki, Nicolas. Springer Berlin Heidelberg, 2007.

> Standard book about Lie theory. Chapter 4 is called *Coxeter groups and Tits systems*, and it looks like it's the fundation of all the theory of Coxeter groups and their combinatorial representation

[Bue79] Francis Buekenhout. Diagrams for geometries and groups. *Journal of Combinatorial Theory, Series A*, 27(2):121 – 151, 1979.

> VERY INTERESTING, from a first skimming I see a lot, and I mean ALOT of Coxeter diagrams, even though I don't see any circle around the dots, it might not have anything to do with buildings or wythoff construction kind of polytopes.

[HN14] Georg Hofmann and Karl-Hermann Neeb. On convex hull of orbits of coxeter groups and weyl groups. *Münster Journal of Mathematics*, 7(2):463 – 487, 2014.

> The main theorem asserts that if v is an element of the Tits cone of a linear Coxeter system and $\mathcal{W}$ is the corrsponding Coxeter group, then $\mathcal{W} \subset v - C_v$, where C_v is the convex cone generated by the cooroots $\breve{\alpha}$, for which $\alpha(v) > 0$. This implies that the convex hull of $\mathcal{W}v$ is completely determined by the image of v under the reflections in $\mathcal{W}$. This could be really really interesting.

[Hum92] J.E. Humphreys. *Reflection Groups and Coxeter Groups*. Cambridge Studies in Advanced Mathematics. Cambridge University Press, 1992.

> Introductory textbook about Coxeter groups and their linear representation as linear reflection groups of some vector space. THe first two chapter build everything from the groud up: reflections, root systems, generators, fundamental chambers, classification of finite Coxeter groups. Moreover in the first chapter there is a section called *Coxeter complexes*, which I reckon will be equivalent to the Wythoff construction, and it's very connected to what described in the Tits book [Tit74]

[Tit74] J. Tits. *Buildings of Spherical Type and Finite BN-pairs*. Lecture notes in mathematics. Springer-Verlag, 1974.

> Old typrewtieen book about buidings, but the first two chapters (1. Complexes and 2. Coxeter complexes) look surprisingly interesting and easy to read