- $A = \mathbb{Q}^+$ (positive rationals), we say

$$x\mathcal{R}y \iff \frac{y}{x} = 2^m, \quad m \in \mathbb{Z}$$

  - reflexive: $x/x = 1 = 2^0$.
  - symmetric: if $y/x = 2^m$, then $x/y = 2^{-m}$.
  - transitive: if $y/x = 2^m$ and $z/y = 2^\ell$, then $z/x = (z/y)(y/x) = 2^{m+\ell}$.

- Now pick $r \in \mathbb{Q}^+$.

$$y \in [r] \iff y \sim r \iff \frac{y}{r} = 2^m \iff y = 2^m \cdot r.$$

  Therefore

$$[r] = \{2^m \cdot r : m \in \mathbb{Z}\}.$$