#. Simplyfying Dyadic Games

The Game $\{ 5/32 \mid 9/16 \}$

Left options Right options.

$$\frac{5}{32} < x < \frac{9}{16}$$

• Dyadic numbers born by day 6 (Birthday formula)

So, $\frac{5}{32} < \frac{1}{2} < \frac{9}{16}$

(day 2) works

#. $B > \{ -1/4 \mid 1/32 \}$

$\Rightarrow \frac{-1}{4} < x < \frac{1}{32}$ $x = 0$ ↓ day (0)

2) Proof of Equality.

$G^L < x < G^R$, $G = x$ then

#. $G \neq x$, (assume it)

1) $G < x \Rightarrow$ for some $G^R \leq x$.

But x is simplest, no $x^L \geq G^R$, forcing $x^R \geq G^R$ to avoid contradictions.

2) Symmetrically, if $G > x$, some $G^L \geq x$, which is impossible b'cause x satisfies $G^L < x$.

Thus $G = x$.