

(5.10) The assumed uranium resources in Japan are 4 kt, in Argentina 12 kt, and in France 48 kt U_3O_8 . How many 1 GW_e reactor years can these uranium amounts sustain in each country at the uranium consumption rate (a) of the previous exercise?

$$Rate := 193 \quad t/GW_e yr \quad Rate_{oxide} := \frac{Rate \cdot (3 \cdot 238 + 8 \cdot 16)}{3 \cdot 238}$$

$$Rate_{oxide} = 227.6 \quad t/GW_e yr$$

$$\text{Japan:} \quad \frac{4000}{Rate_{oxide}} = 17.6 \quad \text{years}$$

$$\text{Argentina:} \quad \frac{12000}{Rate_{oxide}} = 52.7 \quad \text{years}$$

$$\text{France:} \quad \frac{48000}{Rate_{oxide}} = 210.9 \quad \text{years}$$