a) Men: $w_i = 10.386 - 0.0386 G_i$ (1)

Women: $w_i = 11.606 - 0.0636 G_i$ (2)

(1) = (2)

$0.0256 G_i = 1.220$

$G_i = 48.8$

Game i year $1948 + (i-1) \times 4$

$1948 + (48.8 - 1) \times 4 \approx 2139{,}2 \rightarrow$

olympic games of 2140

b) $2.341 - 0.0038 G_i = 2.452 - 0.0056 G_i$

$G_i = 61.7$

$1948 + (61.7 - 1) \times 4 \approx 2180{,}8 \rightarrow$

olympic games of 2192

c) $w_i = 10.386 - 0.038 \cdot 48.8 = 8.53$

d) linear and non-linear trend models

forecasts → same short run (approximately)

→ different longer run