31-34
FAT AT JOE'S

Fuse in primary circuit will blow if current in secondary is 8.50 mA.

b) What is ratio of secondary to primary turns of transformer?
\[ \frac{V_s}{V_t} = \frac{N_s}{N_t} \]
\[ \frac{13000V}{120V} = \frac{N_s}{N_t} \]

\[ N_s = 108 \]

b) What power must be supplied to transformer when secondary current is 8.50 mA?
\[ P = VI = 13000V \times 8.50mA \]
\[ P = 110.5W \]

b) What current rating should fuse have?
Fuse blown out when currents are too high to need current relationship.
\[ I_1 = \frac{V_s}{V_t} \times I_s \]
\[ I_1 = \frac{13000V}{120V} \times 8.50mA \]
\[ I_1 = 0.92 A \]

So a 10 A fuse will work.

4.05