

Subject 27

Please, don't write on the exam paper.

In Utopia, the tax on earned income is calculated as follows: the first £20 000 is tax free, and a 20% tax is put on the remaining income.

- a) Find the tax payable on an earned income of £15 000 and of £45 000.
- b) Taking as x the number of pounds corresponding to earned income and as y the number of pounds corresponding to tax, define a function f such that $y = f(x)$. Draw a sketch of the function, then state the domain and range of f .
- c) Is it possible to define the inverse function of f ? Explain.