4 Sam starts a job with an annual salary of £16 000. It is promised that the salary will go up by the same amount every year. In the second year Sam is paid £17 200.

(a) Find Sam's salary in the tenth year. [2]

(b) Find the number of complete years needed for Sam's **total** salary to first exceed £500 000. [4]

(c) Comment on how realistic this model may be in the long term. [1]