

- 8 (a)** An arithmetic progression is such that its first term is 6 and its tenth term is 19.5.

Find the sum of the first 100 terms of this arithmetic progression.

[4]

[illegible]

- (b)** A geometric progression a_1, a_2, a_3, \dots is such that $a_1 = 24$ and the common ratio is $\frac{1}{2}$.

The sum to infinity of this geometric progression is denoted by S . The sum to infinity of the even-numbered terms (i.e. a_2, a_4, a_6, \dots) is denoted by S_E .

Find the values of S and S_E .

[4]

[illegible]