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1. In an arithmetic sequence, the first term is 15 and the second term is 9.

(a) Find the common difference.

(b) Find the sixth term.

2. Given that for a geometric sequence $u_1 = 48$ and $u_2 = 36$

(a) Find the value of r .

(b) Find u_4 .

3. The first three terms of an arithmetic sequence are $u_1 = 7.1$, $u_2 = 7.4$, and $u_3 = 7.7$.

(a) Find the common difference.

(b) Given that the k th term of the sequence, $u_k = 11$. Find k .