Marked example 1

Paper 1 style · No calculator

1 5 marks SL 1.3 ●○○ Routine

In a geometric sequence, $u_2 = 12$ and $u_5 = 96$.

(a) Find the common ratio. **[2]**

(b) Find the first term. **[1]**

(c) Find the sum of the first 6 terms. **[2]**

MARKSCHEME (a)

$r^3 = \frac{96}{12} = 8$ **(M1)**

$r = 2$ **A1**

Total 2 marks

MARKSCHEME (b)

$u_1 = \frac{12}{2} = 6$ **A1**

Total 1 mark

MARKSCHEME (c)

$S_6 = \frac{6\left(2^6 - 1\right)}{2 - 1}$ **(M1)**

$= 378$ **A1**

Total 2 marks

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