Marked example 2

Paper 1 style · No calculator

2 4 marks SL 1.8 ●●○ Typical

The first two terms of a geometric series are 24 and 18.

(a) Find the common ratio. **[1]**

(b) Explain why the series has a sum to infinity. **[1]**

(c) Find the sum to infinity. **[2]**

MARKSCHEME (a)

$r = \frac{18}{24} = \frac{3}{4}$

A1

Total 1 mark

MARKSCHEME (b)

$|r| < 1$

R1

Total 1 mark

MARKSCHEME (c)

$S_\infty = \frac{24}{1 - \frac{3}{4}}$

(M1)

$= 96$

A1

Total 2 marks

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