

(C2-7.2a) Name:

Homework Questions 2 – The General Term for a Geometric Sequence

1. Find a formula for the nth term of these sequences

a) 27, 9, 3, 1

$$u_n = 27 \times \left(\frac{1}{3}\right)^{n-1}$$

b) 5, 15, 45, 135

$$u_n = 5 \times (3)^{n-1}$$

c) 2, 2.5, 3.125, 3.90625

$$u_n = 2 \times (1.25)^{n-1}$$

d) 5, -10, 20, -40

$$u_n = 5 \times (-2)^{n-1}$$

2. Find the first 3 terms of these geometric sequences given

a) $a = 4$ $r = 2$

4, 8, 16

b) $a = 5$ $r = 8$

5, 40, 320

c) $a = 7$ $r = 1.5$

7, 10.5, 15.75

3. Find the 10th term of the following sequences

a) 2, 8, 32, 128

524288

b) 96, 48, 24, 12

0.1875

c) 3, 7.5, 18.75, 46.875

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