

# Edexcel Core 2 Sequences and series

## Section 2: Geometric sequences and series

### Exercise level 1

1. Find the 10<sup>th</sup> term of the geometric sequence 20, 16, 12.8, ...
2. The first term of a geometric sequence is 1 and the common ratio is 3.
  - (i) Find the 7<sup>th</sup> term.
  - (ii) Find the sum of the first 8 terms.
3. A geometric sequence has first term 2 and common ratio 0.75.
  - (i) Find the 4<sup>th</sup> term.
  - (ii) Find the sum of the first 5 terms.
  - (iii) Find the sum to infinity of the sequence.
4. A geometric sequence has 3<sup>rd</sup> term 18 and 6<sup>th</sup> term -60.75. Find the first term and the common ratio.
5. A geometric series has first term 2 and sum to infinity 5.
  - (i) Find the common ratio.
  - (ii) Find the sum of the first 10 terms of the series.
  - (iii) How many terms are needed for the sum of the series to exceed 4.99?
6. A geometric sequence has first term 12, and common ratio 1.5
  - (i) Find the fifth term.
  - (ii) Find the sum of the first 10 terms, to the nearest whole number.
7. A series is  $28 + 7 + 1.75 + \dots$   
Find the sum to infinity of the series.