Exercise 6D

1 For each sequence, find the common ratio and the 7th term.

   a 16, 8, 4, …   **b** −4, 12, −36, …

   c 1, 10, 100, …   **d** 25, 10, 4, …

   e 2, $6x$, $18x^2$, …   **f** a^7b, a^6b^2, a^5b^3, …

Exercise 6E

1 A geometric sequence has 2nd term 50 and 5th term 3.2.
Find the first term and the common ratio.

2 A geometric sequence has 3rd term −18 and 6th term 144.
Find the first term and the common ratio.

3 For each geometric sequence, find the least value of n such
that the nth term is greater than 1000.

   a 16, 24, 36, …   **b** 1, 2.4, 5.76, …

   c 112, −168, 252, …   **d** 50, 55, 60.5, …

4 A geometric sequence has first term 9 and third term 144.
Show that there are two possible values for the common ratio,
and find the two possible values for the second term.

5 Find the value of p in the geometric sequence 18, p, 40.5, …

⋮ EXAM-STYLE QUESTION
⋮ **6** Find the positive value of x in the geometric sequence
⋮ $7x − 2$, $4x + 4$, $3x$, …