Fibonacci and Geometric Sequences

Question 1. Write the next two terms in the sequence: $1, 1, 2, 3, 5, \ldots$

[3 marks]

Question 2. Continue this Fibonacci-style sequence: $2, 4, 6, 10, 16, \ldots$

[3 marks]

Question 3. The first term is 5 and the second term is 6. Each term is the sum of the two previous terms. Find the next three terms.

[3 marks]

Question 4. A sequence starts with a and b, and follows a Fibonacci rule. If the first three terms are $2, x, 5$, find the value of x.

[3 marks]

Question 5. A Fibonacci-type sequence starts $3, 4, \ldots$. The 6th term is 29. Find the 3rd, 4th and 5th terms.

[3 marks]

Question 6. A Fibonacci sequence has 1st term 0 and 2nd term 2. What is the 8th term?

[3 marks]

Question 7. Two consecutive terms in a Fibonacci sequence are 21 and 34. What are the two terms that came before them?

[3 marks]

Question 8. Write the next two terms in the sequence: $2, 4, 8, 16, \ldots$

[3 marks]

Question 9. Write the next two terms of the sequence: $81, 27, 9, \ldots$

[3 marks]

Question 10. What is the 5th term of the geometric sequence: $3, 6, 12, \ldots$

[3 marks]

Question 11. A geometric sequence starts with 100 and multiplies by 0.5 each time. Find the 4th term.

[3 marks]

Question 12. A geometric sequence has first term 1 and common ratio 3. What is the 6th term?

[3 marks]

Question 13. Is the sequence $1, 2, 4, 8, 17, \ldots$ geometric? Explain why or why not.

[3 marks]

Question 14. The 3rd term of a geometric sequence is 16 and the 4th term is 32. What is the common ratio?

[3 marks]

Question 15. A geometric sequence has common ratio r and the second term is 12. The first term is 4. Find the value of r.

[3 marks]

Question 16. A geometric sequence has 1st term 5 and common ratio 2. Find the 6th term.

[3 marks]

Question 17. A sequence goes: $a, ar, ar^2, ar^3, \ldots$. If $a = 2$ and $r = 3$, find the 5th term.

[3 marks]

Question 18. The 1st term of a geometric sequence is 81 and the 4th term is 3. Find the common ratio.

[3 marks]

Question 19. A geometric sequence decreases: $160, 80, 40, \ldots$. What is the 8th term?

[3 marks]

Question 20. A geometric sequence has a first term of 1 and common ratio $\frac{1}{2}$. Find the sum of the first 5 terms.

[3 marks]
