Question 6: Which term in the sequences below is the first to be greater than 250?

(a) 9, 13, 17, 21, ...

(b) 2, 10, 18, 26, ...

Question 7: Find the n^{th} term for each of the following sequences

(a) $\frac{1}{2}, \frac{3}{4}, \frac{5}{6}, \frac{7}{8}, \ldots \ldots$

(b) $\frac{9}{11}, \frac{13}{16}, \frac{17}{21}, \frac{21}{26}, \ldots \ldots$

(c) $\frac{3}{7}, \frac{6}{12}, \frac{9}{17}, \frac{12}{22}, \ldots \ldots$

(d) $\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{4}{5}, \ldots \ldots$

(e) $\frac{20}{21}, \frac{25}{32}, \frac{30}{43}, \frac{35}{54}, \ldots \ldots$

(f) $\frac{99}{100}, \frac{97}{95}, \frac{95}{90}, \frac{93}{85}, \ldots \ldots$

Question 7: Work out the n^{th} term for each quadratic sequence

(a) 7, 12, 19, 28, 39 ...

(b) 7, 16, 31, 52, 79 ...

(c) 6, 13, 24, 39, 58 ...

(d) 3, 13, 27, 45, 67 ...

(e) 9, 20, 35, 54, 77 ...

(f) 9, 24, 45, 72, 105 ...

(g) −6, −1, 6, 15, 26 ...

(h) −5, −4, −1, 4, 11 ...

(i) 7, 10, 17, 28, 43 ...

(j) 2.5, 5, 8.5, 13, 18.5 ...

(k) −0.5, 1, 4.5, 10, 17.5 ...