

(1) a) $a_1 = 1$
 $a_2 = 5$
 $a_3 = 9$ $a_n = 4n - 3$
 $a_4 = 13$
 $a_5 = 17$

b) $a_1 = -8$
 $a_2 = -5$
 $a_3 = -2$ $a_n = 3n - 11$
 $a_4 = 1$
 $a_5 = 4$

(2) a) $a_1 = \frac{1}{3}$
 $a_2 = -\frac{1}{6}$
 $a_3 = -\frac{2}{3}$ $a_n = -\frac{n}{2} + \frac{5}{6}$
 $a_4 = -\frac{7}{6}$
 $a_5 = -\frac{20}{12}$

b) $a_1 = 3.8$
 $a_2 = 1.1$
 $a_3 = -1.6$ $a_n = -2.7n + 6.5$
 $a_4 = -4.3$
 $a_5 = -7$

(3) a) $a_1 = 3$
 $a_2 = -6$
 $a_3 = 12$ $a_n = 3 \cdot (-2)^{n-1}$
 $a_4 = -24$
 $a_5 = 48$

b) $a_1 = 243$
 $a_2 = 81$
 $a_3 = 27$ $a_n = 243 \cdot \left(\frac{1}{3}\right)^{n-1}$
 $a_4 = 9$
 $a_5 = 3$

(4) a) $a_1 = 10$
 $a_2 = 5\sqrt{2}$
 $a_3 = 5$ $a_n = 10 \cdot \left(\frac{1}{\sqrt{2}}\right)^{n-1}$
 $a_4 = \sqrt{2}$
 $a_5 = 1$

b) $a_1 = \frac{1}{8}$
 $a_2 = \frac{8}{27}$
 $a_3 = \frac{27}{64}$ $a_n = 10 \cdot \left(\frac{n}{n+1}\right)^3$
 $a_4 = \frac{64}{125}$
 $a_5 = \frac{125}{216}$

(5) a) $a_1 = \frac{8}{3}$
 $a_2 = \frac{2}{1}$
 $a_3 = \frac{3}{2}$ $a_n = \frac{8}{3} \cdot \left(\frac{3}{4}\right)^{n-1}$
 $a_4 = \frac{9}{8}$
 $a_5 = \frac{27}{32}$

b) $a_1 = \frac{1}{2}$
 $a_2 = \frac{2}{6}$
 $a_3 = \frac{4}{18}$ $a_n = \frac{1}{2} \cdot \left(\frac{2}{3}\right)^{n-1}$
 $a_4 = \frac{8}{54}$
 $a_5 = \frac{16}{162}$

(6) 25.6 mm