SECTION 5.3

5.3.1 Sketch the graph of $y = 5 - 2x - x^2$. Plot any stationary points and any points of inflection.

5.3.2 Sketch the graph of $y = x^3 - 9x^2 + 24x - 7$. Plot any stationary points and any points of inflection.

5.3.3 Sketch the graph of $y = x^3 + 6x^2$. Plot any stationary points and any points of inflection.

5.3.4 Sketch the graph of $y = x^3 - 5x^2 + 8x - 4$. Plot any stationary points and any points of inflection.

5.3.5 Sketch the graph of $y = x^3 - 12x + 6$. Plot any stationary points and any points of inflection.

5.3.6 Sketch the graph of $y = x^3 - 6x^2 + 9x + 6$. Plot any stationary points and any points of inflection.

5.3.7 Sketch the graph of $y = 3x^4 - 4x^3 + 1$. Plot any stationary points and any points of inflection.

5.3.8 Sketch the graph of $y = x^2(9 - x^2)$. Plot any stationary points and any points of inflection.

5.3.9 Sketch the graph of $y = x^4 - 2x^2 + 7$. Plot any stationary points and any points of inflection.

5.3.10 Sketch the graph of $y = x^3 + \frac{3}{2}x^2 - 6x + 12$. Plot any stationary points and any points of inflection.

5.3.11 Sketch the graph of $y = \left(\frac{x-3}{x-1}\right)^2$. Plot any stationary points and any points of inflection. Show any horizontal and vertical asymptotes.

5.3.12 Sketch the graph of $y = \frac{x^2}{x^2+1}$. Plot any stationary points and any points of inflection. Show any horizontal and vertical asymptotes.

5.3.13 Sketch the graph of $y = \frac{x^2 - x}{(x+1)^2}$. Plot any stationary points and any points of inflection. Show any horizontal and vertical asymptotes.

5.3.14 Sketch the graph of $y = \frac{3x^2}{x^2-4}$. Plot any stationary points and any points of inflection. Show any horizontal and vertical asymptotes.

5.3.15 Sketch the graph of $y = \frac{8}{4-x^2}$. Plot any stationary points and any points of inflection. Show any horizontal and vertical asymptotes.

5.3.16 Sketch the graph of $y = \frac{x^2}{x^2-9}$. Plot any stationary points and any points of inflection. Show any vertical and horizontal asymptotes.

5.3.17 Sketch the graph of $y = \frac{1}{x-3} + 1$. Plot any stationary points and any points of inflection. Show any vertical and horizontal asymptotes.

5.3.18 Sketch the graph of $y = 2 - \frac{3}{x} - \frac{3}{x^2}$. Plot any stationary points and any points of inflection. Show any vertical and horizontal asymptotes.

5.3.19 Sketch $y = 1 + \frac{2}{x} - \frac{1}{x^2}$. Plot any stationary points and any points of inflection. Show any vertical and horizontal asymptotes.

5.3.20 Sketch the graph of $y = \dfrac{x^2 - 3}{x}$. Show all vertical, horizontal, and oblique asymptotes.

5.3.21 Sketch the graph of $y = \dfrac{x^2 - 2x - 2}{x + 1}$. Show all vertical, horizontal and oblique asymptotes.

5.3.22 Sketch the graph of $y = 1 + (x - 2)^{1/3}$. Plot any stationary points and any inflections points.

5.3.23 Sketch the graph of $y = x^{1/3}(x + 4)$. Plot any stationary points and any inflections points.

5.3.24 Sketch the graph of $y = (x + 1)^{1/3}(x - 4)$. Plot any stationary points and any inflections points.

5.3.25 Sketch the graph of $y = (x + 1)^{2/3}$. Plot any stationary points, inflections points, and cusps which may or may not exist.

5.3.26 Sketch the graph of $y = x^{2/3}(x + 5)$. Plot any stationary points, inflections points, and cusps which may or may not exist.

5.3.27 Sketch the graph of $y = x(x - 3)^{2/3}$. Plot any stationary points, inflections points, and cusps which may or may not exist.

5.3.28 Sketch the graph of $y = (x - 2)^{2/3} - 1$. Plot any stationary points, inflections points, and cusps which may or may not exist.

5.3.29 Sketch the graph of $y = x^{2/3}(x - 3)^2$. Plot any stationary points, inflection points, and cusps which may or may not exist.

5.3.30 Sketch the graph of $y = (x - 1)^{4/5}$. Plot any stationary points, inflection points, and cusps which may or may not exist.

5.3.31 Sketch the graph of $y = \sqrt{4 - x^2}$. Plot any stationary points.

5.3.32 Sketch the graph of $y = \sqrt{\dfrac{x}{4 - x}}$.

5.3.33 Sketch the graph of $y = \sqrt{x}(x - 2)$. Plot any stationary points and any inflection points.

5.3.34 Sketch the graph of $y = x - 2\sqrt{x}$. Plot any stationary points and any inflection points.

5.3.35 Sketch the graph of $y = \dfrac{1}{5}x^{5/2} - x^{3/2}$. Plot any stationary and any inflection points.

5.3.36 Sketch the graph of $y = \dfrac{1}{2}x^{4/3} - 2x^{1/3}$. Plot any stationary points and points of inflection.