Calculus Honors - M7H

Domains - Homework 1

Find the domain of the following functions and write it using interval notation. Show your work:

(i) $f(x) = 3x^3 + 5x^2 - 7x + 5$

(ii) $g(x) = \dfrac{2x-5}{x+6}$

(iii) $h(x) = \dfrac{5x^2 - 3x + 6}{7x^2 - 7x - 14}$

(iv) $p(x) = \sqrt{2 - (x-7)}$

(v) $m(x) = \dfrac{\log(x+1)}{\sqrt{x^2 - 9}}$

(vi) $q(x) = \log_5(\sqrt{6x^2 + 28x - 10})$

(vii) $s(x) = \dfrac{\sqrt{x^2 - 5x + 6}}{3x^2 - 3x - 90}$

(viii) $g(x) = \dfrac{\ln(x^2 - 6x - 7)}{\sqrt{(2x^2 + 2x - 12) \cdot (x^2 + 8x - 9)}}$