Topic: Binomial Expansion

Question

$$f(x) = \frac{1}{\sqrt{(9+4x^2)}}, \qquad |x| < \frac{3}{2}$$

Find the first three non-zero terms of the binomial expansion of f(*x*) in ascending powers of *x*. Give each coefficient as a simplified fraction.

(6)
(Total 6 marks)