

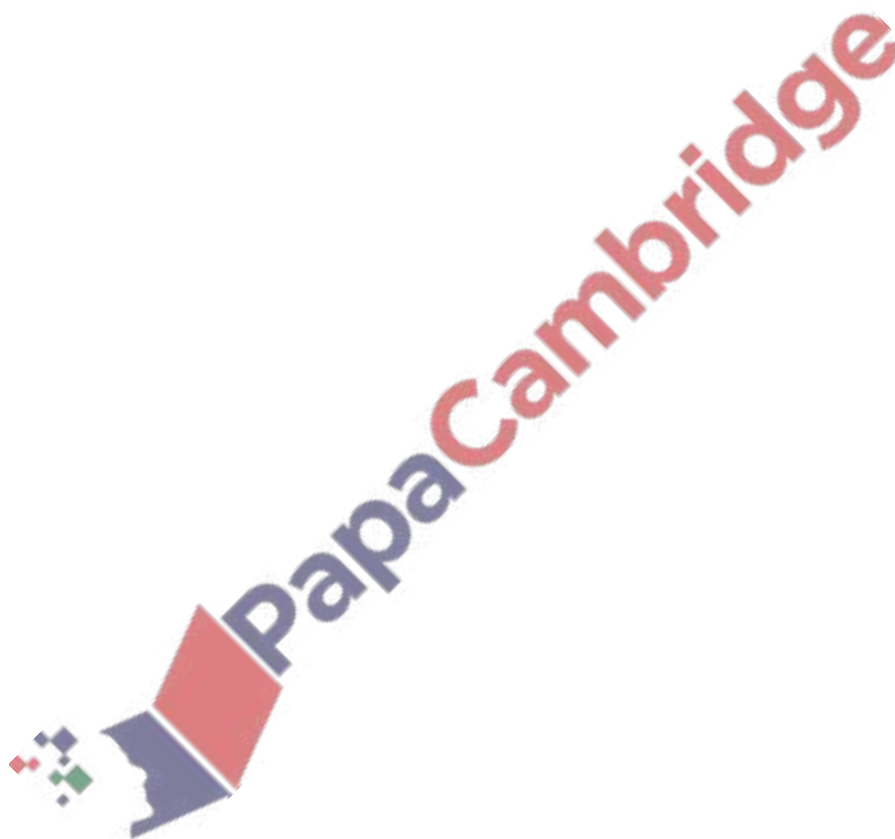
1. June/2021/Paper_9709/32/No.9

$$\text{Let } f(x) = \frac{14 - 3x + 2x^2}{(2 + x)(3 + x^2)}.$$

(a) Express $f(x)$ in partial fractions.

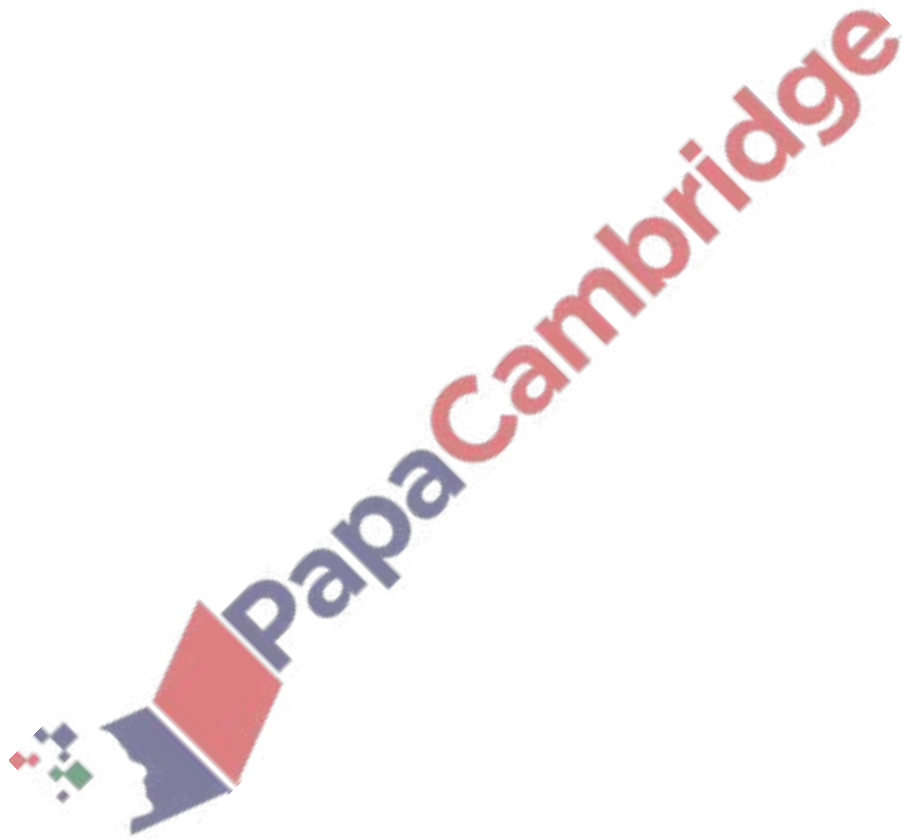
[5]

(b) Hence obtain the expansion of $f(x)$ in ascending powers of x , up to and including the term in x^2 .
[5]



2. June/2021/Paper_9709/33/No.1

Expand $(1 + 3x)^{\frac{2}{3}}$ in ascending powers of x , up to and including the term in x^3 , simplifying the coefficients. [4]

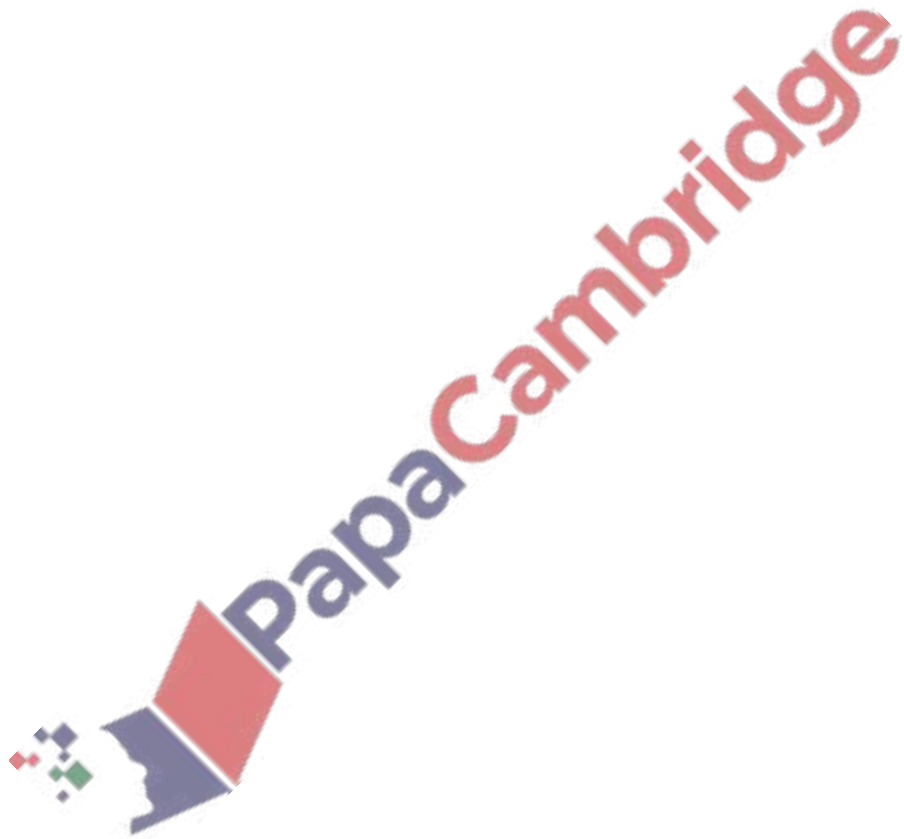


3. June/2021/Paper_9709/33/No.4a

$$\text{Let } f(x) = \frac{15 - 6x}{(1 + 2x)(4 - x)}.$$

(a) Express $f(x)$ in partial fractions.

[3]



4. March/2021/Paper_9709/32/No.6a

Let $f(x) = \frac{a}{(2x - a)(3a - x)}$, where a is a positive constant.

(a) Express $f(x)$ in partial fractions.

[3]

