1.7 Homework

GCSE Mathematics
Algebraic Fractions

Marks Available : 30

Simplify the following algebraic expressions by first factorising the quadratics:

(i) $\dfrac{x^2 + 5x + 6}{x^2 + 8x + 12}$

[3 marks]

(ii) $\dfrac{x^2 + 6x + 9}{x^2 + 7x + 12}$

[3 marks]

(iii) $\dfrac{x^2 + 15x + 50}{x^2 + 9x + 20}$

[3 marks]

(iv) $\dfrac{x^2 + 7x + 12}{x^2 + 9x + 20}$

[3 marks]

(v) $\dfrac{x^2 + 13x + 22}{x + 11} + \dfrac{x^2 + 8x + 16}{x + 4}$

[3 marks]

(vi) $\dfrac{x^2 + 10x + 16}{x + 2} + \dfrac{x^2 + 8x + 15}{x + 5}$

[3 marks]

(vii) $\dfrac{x^2 - 6x + 9}{x^2 - 7x + 12}$

[3 marks]

(viii) $\dfrac{x^2 - 13x + 40}{x^2 - 10x + 25}$

[3 marks]

(ix) $\dfrac{x^2 + 18x + 80}{x + 10} + \dfrac{x^2 - 7x + 10}{x - 2}$

[3 marks]

(x) $\dfrac{x^2 + 8x + 12}{x + 2} + \dfrac{x^2 - 13x + 36}{x - 4}$

[3 marks]