

Algebraic Fractions

1. Simplify the following:

a.
$$\frac{4m+1}{4} + \frac{1-3m}{3}$$

b. $\frac{4m-1}{4} + \frac{5-6m}{6}$
c. $\frac{3m+1}{3} + \frac{4m-1}{4}$
d. $\frac{3m+2}{6} + \frac{2-4m}{8}$

(16 Marks)

2. Simplify the following:

a.
$$\frac{x^2 - 49}{x^2 + 9x + 14}$$

b.
$$\frac{4x^2 - 25}{2x^2 + 7x + 5}$$

c.
$$\frac{9x^2 - 36}{3x^2 - 3x - 6}$$

(9 Marks)

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3. Write the following as single fractions:

a.
$$\frac{3}{x+2} + \frac{2}{x-4}$$

b. $\frac{10}{2x-3} - \frac{3}{x+2}$
c. $\frac{20}{4x-10} - \frac{8}{3x-10}$

4. Solve the following equation:

$$\frac{1}{x+2} + \frac{2}{x-3} = 1$$

(5 Marks)