

ALGEBRAIC FRACTIONS

This material contains solved past papers. Every question bears the examination year and the original serial number.

10 Write as a fraction in its simplest form

0580/02/J/07

$$\frac{x-3}{4} + \frac{4}{x-3}$$
$$\frac{(x-3)(x-3) + 4(4)}{4(x-3)}$$
$$= \frac{x^2 - 6x + 9 + 16}{4(x-3)}$$
$$= \frac{x^2 - 6x + 25}{4(x-3)}$$

Ans:

$$\frac{x^2 - 6x + 25}{4(x-3)}$$

Answer $\frac{x^2 - 6x + 25}{4(x-3)}$ [3]

12 Solve the equation.

$$\frac{3}{2x} + \frac{1}{x+1} = 0$$

0580/22/M/J/14

LHS:

$$\frac{3}{2x} + \frac{1}{x+1} = \frac{3(x+1) + 1(2x)}{2x(x+1)} = \frac{3x + 3 + 2x}{2x(x+1)}$$

Also; LHS = 0

$$\Rightarrow 5x + 3 = 0$$

$$\Rightarrow 5x = -3$$

$$\Rightarrow x = \frac{-3}{5}$$

Answer $x = \frac{-3}{5}$ [3]

10 Write as a single fraction in its simplest form.

0580/22/O/N/11

$$\frac{3}{x+10} - \frac{1}{x+4}$$

Finding the Lcm:

$$\frac{3(x+4) - 1(x+10)}{(x+10)(x+4)}$$

$$= \frac{3x+12-x-10}{(x+10)(x+4)}$$

$$= \frac{2x+2}{(x+10)(x+4)}$$

Answer $\frac{2x+2}{(x+10)(x+4)}$ [3]
