

Expression With Four Terms

Example

Factorise: **a** $3ab + d + 3ad + b$

b $x^2 + 2x + 5x + 10$

$$\begin{aligned}\mathbf{a} \quad & 3ab + d + 3ad + b \\ &= \underbrace{3ab + b} + \underbrace{3ad + d} \\ &= b(3a + 1) + d(3a + 1) \\ &= (3a + 1)(b + d)\end{aligned}$$

$$\begin{aligned}\mathbf{b} \quad & \underbrace{x^2 + 2x} + \underbrace{5x + 10} \\ &= x(x + 2) + 5(x + 2) \\ &= (x + 2)(x + 5)\end{aligned}$$

1 Factorise:

a $2a + 2 + ab + b$

b $4d + ac + ad + 4c$

c $ab + 6 + 2b + 3a$

d $mn + 3p + np + 3m$

e $x^2 + 3x + 7x + 21$

f $x^2 + 5x + 4x + 20$

g $2x^2 + x + 6x + 3$

h $3x^2 + 2x + 12x + 8$

i $20x^2 + 12x + 5x + 3$

