Expansion

Q_1 Expand 2(p+q+4) –3(2p+4q-3)

Solution

=2 x p+2xq+2 x 4 -3 x 2p -3x 4q –3x-3

= 2p+2q+8 –6p –12q+9 We must collect the like terms

= 2p –6p +2q -12q +8 +9

= -4p-10q+17

Q_2 Expand $(2x-4y)(3x+y)$ a binomial expansion

1) Because there are **2 terms** in the first bracket we write (3x+y) **twice**
2) (3x+y) (3x+y)
3) Now multiply each by 2x and –4y respectively
4) 2x(3x+y) –4y (3x+y) expand and collect like terms
5) $6x^2+2xy-12xy-4y^2$ = $6x^2-10xy-4y^2$

Factorisation

This is the opposite of expansion here we remove the highest common factor in a expression

Q_3

Factorise

$12x^4+16x^3$