

Removing Brackets (the distributive law)

Be able to expand out brackets

Examples :-

$$\begin{aligned} 1. \quad & 3(x+2) \\ & = 3x+6 \end{aligned}$$

$$\begin{aligned} 2. \quad & 2(4p-7q) \\ & = 8p-14q \end{aligned}$$

$$\begin{aligned} 3. \quad & a(a+8) \\ & = a^2+8a \end{aligned}$$

$$\begin{aligned} 4. \quad & 4m(5m-9n) \\ & = 20m^2-36mn \end{aligned}$$

$$\begin{aligned} 5. \quad & -2(q+5) \\ & = -2q-10 \end{aligned}$$

$$\begin{aligned} 6. \quad & -4(h-2) \\ & = -4h-4 \times (-2) \\ & = -4h+8 \end{aligned}$$

* note the Double Negative

Exercise 2



1. Multiply out the brackets :-

a $2(a+5)$

b $3(x+2)$

c $6(g+1)$

d $7(m+4)$

e $2(x-3)$

f $5(n-2)$

g $8(p-1)$

h $10(t-4)$

i $5(m-4)$

j $2(1-u)$

k $7(2-x)$

l $15(2+k)$

m $4(a+b)$

n $2(c+d)$

o $5(m-n)$

p $10(d-e)$

q $20(3+x)$

r $30(4-w)$

s $100(a-3)$

t $50(g-6)$

2. Remove the brackets :-

a $2(3x+1)$

b $2(4a+3)$

c $3(1+5d)$

d $4(3-5k)$

e $7(7h-2)$

f $8(5-4n)$

g $6(5a+y)$

h $2(6t+2z)$

i $2(5b-4c)$

j $7(10k-2p)$

k $x(y+2)$

l $a(b-8)$

m $v(w-1)$

n $a(a-3)$

o $p(1-p)$

p $x(2+x)$

q $p(3q+r)$

r $5a(2-4a)$

s $2u(10u-y)$

t $2(3a+2b+1)$

u $5(2v+6w+8y)$

v $3(5x-2y-4z)$

w $10(p+q-4r)$

x $8(3u-5v-9)$

3. Rewrite the following without brackets :-

a $-3(x+1)$

b $-2(a-5)$

c $-(m+n)$

d $-(m-n)$

e $-6(p-q)$

f $-x(x+7)$

g $-p(1+p)$

h $-2w(w+9)$

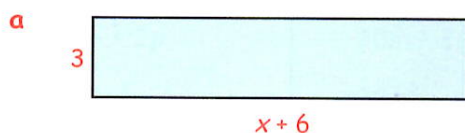
i $-k(7k-1)$

j $-4e(2e+10)$

k $-x(3y-8x)$

l $-p^2(p-10q)$

4. Write the areas of these two rectangles :-
(All units are in centimetres).



(i) with brackets (ii) without brackets.

