

Name: _____

Expanding/ Removing Brackets

Use of brackets

The sum of a and b is $a + b$. And so, twice the sum of a and b is $2(a + b)$. The brackets are used to indicate that the sum of a and b must be treated as a single number. That is $a + b = (a + b)$

Removing brackets

To remove the brackets, we use the **distributive law**. The distributive law states that

$$a \cdot (b + c) = ab + ac$$

1. Simplify by removing the brackets

(a)

$$2 \cdot (x + y) = \text{_____} + \text{_____}$$

$$= \text{_____}$$

(b)

$$3 \cdot (p + q) = \text{_____} + \text{_____}$$

$$= \text{_____}$$

(c)

$$s \cdot (t + 2) = \text{_____}$$

$$= \text{_____}$$

(d)

$$7 \cdot (m + n) = \text{_____}$$

$$= \text{_____}$$

(e)

$$6 \cdot (4 + x) = \text{_____}$$

$$= \text{_____}$$

(f)

$$11 \cdot (4 + d) = \text{_____}$$

$$= \text{_____}$$

(g)

$$9 \cdot (5v + v) = \underline{\hspace{2cm}}$$
$$= \underline{\hspace{2cm}}$$

(h)

$$3a \cdot (x + y) = \underline{\hspace{2cm}}$$
$$= \underline{\hspace{2cm}}$$

(i)

$$6p \cdot (3 + q) = \underline{\hspace{2cm}}$$
$$= \underline{\hspace{2cm}}$$

(j)

$$4x \cdot (2a + 3b) = \underline{\hspace{2cm}}$$
$$= \underline{\hspace{2cm}}$$

(k)

$$5a(2c + 4d) = \underline{\hspace{2cm}}$$
$$= \underline{\hspace{2cm}}$$

(l)

$$3k(9m + 7n) = \underline{\hspace{2cm}}$$
$$= \underline{\hspace{2cm}}$$