GCSE FOUNDATION · REVISION MAT 3

Algebraic notation

1 Write these in a simpler way.

(a) $x + x + x + x$

(b) $3 \times x \times n$

(c) $n \times n \times n$

2 Write down whether each one is an **expression**, an **equation**, a **formula** or an **identity**.

(a) $5(a + b) \equiv 5a + 5b$

(b) $2m + 9 = 21$

(c) $v = u + at$

(d) $8p + q$

3 Cy says,

"ab and $a + b$ mean the same thing."

Explain why Cy is wrong.

4 Which of these are the same as $12a$?

$3a \times 4$, $12 + a$, $6a + 6a$, $a \times 12$, $10a + 2$

Explain how you decide.

5 A rectangle has length $4p$ and width q.

(a) Write an expression for its perimeter.

(b) Write an expression for its area.

(c) Work out the area when $p = 2$ and $q = 7$.

6 The three cards add up to $8m + 6n$.

$m + 4n$	?	$3m - n$

Work out the expression on the missing card.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 3

Algebraic notation

1 (a) $4x$

(b) $3xn$

(c) n^3

2 (a) **identity**

(b) **equation**

(c) **formula**

(d) **expression**

3 ab and $a + b$ are different. Try $a = 3$, $b = 5$: $3 \times 5 = 15$, but $3 + 5 = 8$

Not the same

4 $3a \times 4$, $6a + 6a$, $a \times 12$

Each simplifies to $12a$.

5 (a) $8p + 2q$

(b) $4pq$

(c) **56**

6 $8m + 6n - (m + 4n) - (3m - n)$

$= 4m + 3n$