GCSE FOUNDATION · REVISION MAT 4

Substitution

1 $a = 7$ and $b = -4$

Work out the value of

(a) $a - 6b$

(b) $2a^2 + b$

2 $C = 25 + 12h$

Work out the value of C when $h = 3.5$

3 Omar says,

"When $x = -6$, the value of $3x^2$ is -108."

Explain why Omar is wrong.

4 $p = 6$ and $q = -1$

Show that $p^2 - 3q = 39$

5 A taxi firm uses this formula to work out the cost of a journey.

$C = 3.5 + 2.4m$

C is the cost in pounds and
m is the number of miles.

Hana has £26. Can she afford a 10-mile journey?

6 The time, T minutes, to cook a chicken is

$T = 50w + 15$

where w is the weight in kg.

A 1.5 kg chicken must be ready at 12 pm.

What is the latest time it can go in the oven?

Mr&Mrs MATHS

ANSWERS · REVISION MAT 4

Substitution

1 (a) **31**

(b) **94**

2 **C = 67**

3 $(-6)^2 = 36$, which is positive, so $3 \times 36 = 108$.

$3x^2 = \mathbf{108}$

4 Substitute carefully, using brackets for negatives:

$p^2 - 3q = 39$ ✓

5 C = 3.5 + 2.4 × 10 = £27.50

No, she is £1.50 short.

6 T = 50 × 1.5 + 15 = 90 minutes

90 minutes = 1 h 30 min

Latest start: **10:30 am**

Mr&Mrs MATHS