GCSE FOUNDATION · REVISION MAT 3

Substitution

1 $a = -3$ and $b = 6$

Work out the value of

(a) $2a + 5b$

(b) $b^2 - a$

2 $A = \frac{1}{2}bh$

Work out the value of A when $b = 9$, $h = 7$

3 Nina says,

"When $x = -3$, the value of $x^2 + 1$ is -8."

Explain why Nina is wrong.

4 $p = -2$ and $q = 3$

Show that $5p + 2q = -4$

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

$C = 4 + 1.6m$

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

Hana has £28. Can she afford a 15-mile journey?

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

$T = 35w + 30$

where w is the weight in kg.

A 3 kg chicken must be ready at 7 pm.

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

Mr&Mrs MATHS

ANSWERS · REVISION MAT 3

Substitution

1 (a) **24**

(b) **39**

2 **A = 31.5**

3 $(-3)^2 = 9$, not -9, so $9 + 1 = 10$.

$x^2 + 1 =$ **10**

4 Substitute carefully, using brackets for negatives:

$5p + 2q = -4$ ✓

5 C = 4 + 1.6 × 15 = £28.00

Yes, she has £0.00 left.

6 T = 35 × 3 + 30 = 135 minutes

135 minutes = 2 h 15 min

Latest start: **4:45 pm**