Name _____ Date _____

Stage 8 End of Unit 2 Test

1 Draw a line to join each description (on the left) to the correct expression (on the right).

a	Multiply n by 2 and subtract 3	**i**	$3(n + 2)$
b	Add 2 and n then multiply by 3	**ii**	$2(n + 3)$
c	Multiply n by 3 and add 2	**iii**	$2(n - 3)$
d	Add 3 and n then multiply by 2	**iv**	$2n - 3$
e	Subtract 2 from n then multiply by 3	**v**	$3n + 2$
f	Subtract 3 from n then multiply by 2	**vi**	$3(n - 2)$

[6]

2 Lara thinks of a number x.

Write an expression for the number Lara gets when she

a divides the number by 3 then subtracts 2 _____ **[1]**

b adds 2 to the number then divides by 3. _____ **[1]**

3 Work out the value of each expression.

a $3p + 9$ when $p = -4$ _____

_____ **[2]**

b $\frac{x}{2} - y^2$ when $x = 24$ and $y = 5$ _____

_____ **[2]**

4 Use the formula $s = 3h + 7g$ to work out the value of s when $h = 7$ and $g = 9$.

_____

_____ **[2]**

5 **a** Rearrange the formula $y = mx$ to make x the subject.

_____

_____ **[1]**

b Use your formula to work out the value of x when $y = 4.8$ and $m = 1.2$.

_____

_____ **[1]**

6 Fill in the missing numbers and letters.

a $4(x + 3) = 4x + \_\_\_$

b $y(y + 9) = \_\_\_ + 9y$

c $2(m - 3n) = \_\_\_ - \_\_\_$

d $6x - 18 = 6(x - \_\_\_)$

e $8k + 12 = \_\_\_(\_\_\_ + 3)$

f $5b + 15b^2 = \_\_\_(\_\_\_ + \_\_\_)$ **[6]**

7 Expand and simplify $u(3u + 7) - u(u - 2)$.

_____

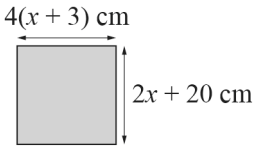
_____ **[2]**

8 Solve the equation $\frac{y}{3} - 8 = 2$.

_____

_____ **[2]**

9 The diagram shows a square.



a Write an equation to represent the problem.

_____ **[1]**

b Solve your equation to find the value of x.

_____

_____ **[2]**

c Work out the side length of the square.

_____

_____ **[2]**

10 For the inequality $-2 < y \leq 4$ write down

a the smallest integer that y could be _____ **[1]**

b the largest integer that y could be _____ **[1]**

c a list of the integer values that y could be. _____ **[1]**

11 Complete these equivalent inequalities.

a $x > 5$ is equivalent to $4x >$ ___

b $y \leq 6$ is equivalent to $y + 3 \leq$ ___ **[2]**

[TOTAL: 36 Marks]

END OF TEST