**End of Unit Test** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Forming and Solving Equations - FOUNDATION**

1) (a) Here is a number machine.



Work out the output when the input is 9.

Answer ......................................................................

**(1)**

(b) Here is the same number machine.



Work out the input when the output is 9.

Answer ......................................................................

 **(1)**

**(Total 2 marks)**

2) (a) Solve        6*x* = 54

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*x* = .............................................................................

**(1)**

(b) Solve        3*y* + 15 = 9

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*y* = .............................................................................

**(2)**

(c) Solve        4*w* + 2 = 2*w* + 7

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*w* = ............................................................................

**(3)**

**(Total 6 marks)**

3) (a) Rearrange the formula to make *w* the subject of        *y* = 3*w* + 8

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Answer ......................................................................

**(2)**

(b) Solve        5(*x* + 4) = 3*x* + 23

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*x* = .............................................................................

**(3)**

**(Total 5 marks)**

4) Solve the simultaneous equations

5*x* + 6*y* = 3

2*x* – 3*y* = 12

Do **not** use trial and improvement. You **must** show your working.

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  Answer .................................................................................

**(Total 3 marks)**

5) The area of the rectangle and the area of the triangle are equal. Not drawn accurately.



Work out the value of *x*.

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*x* = ..........................................................................................

**(Total 4 marks)**

**(Total for test = 20 marks)**