Algebra: Quadratics, Rearranging Formulae and Identities
Calculator 20 minute test 3

Answer all questions.

1 Simplify $x(x-5)-2(x+5)$

[2 marks]

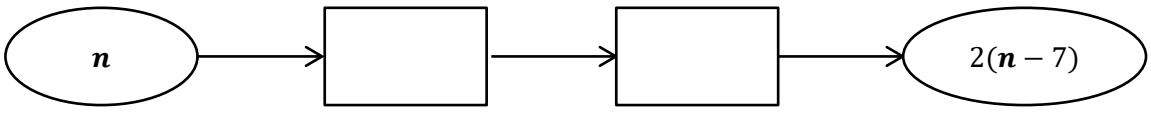
Answer _____

2 Given $y=f(x)$ and $f(x)=3x^2+2$, find y when $x=7$

[2 marks]

Answer _____

3 Here is a number machine

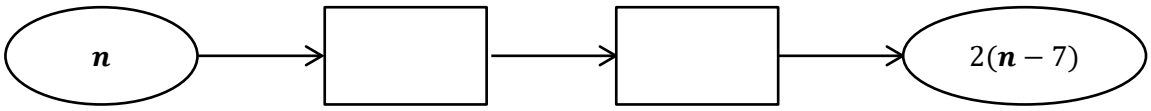


3 (a) Write an operation in each box to make the number machine work.

[2 marks]

3 **(b)** Write a different set of operations in each box to make the number machine work.

[2 marks]



4 A decorator uses the following formula to work out how much she charges (£ C):

$$C = 4A + 25$$

where A is the area to be decorated to the nearest square metre.

Work out the charge for a wall of dimensions 2.5m by 6.3m.

[3 marks]

Answer £ _____

5 Rearrange $d^2 - 16a = 9$ to make d the subject.

[2 marks]

Answer _____

6 Show that $(x + 6)(x - 6) - 3 \equiv x^2 - 39$

[2 marks]

Answer _____

7 Factorise $x^2 - 2x - 99$

[2 marks]

Answer _____

8 Expand $(y - 21)(y - 4)$

[2 marks]

Answer _____