

# Algebra: Quadratics, Rearranging Formulae and Identities

## Calculator 10 minute test 3

Answer all questions.

1 Tick the statements below that are the same as the answer to  $a^3 \times a^3$  [2 marks]

1 (a)  $2a^3$

1 (b)  $a^9$

1 (c)  $a^6$

1 (d)  $(a^3)^2$

2 Factorise fully  $4x^2 - 100x$  [2 marks]

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Answer \_\_\_\_\_

3 Make  $c$  the subject of  $a = b + \frac{c}{2}$  [2 marks]

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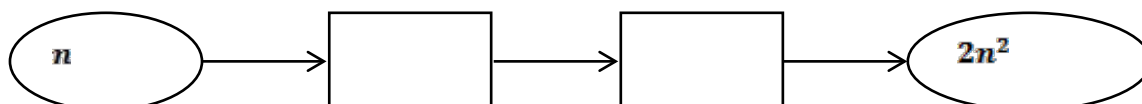
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Answer \_\_\_\_\_

4 Here is a number machine



Write an operation in each box to make the number machine work.

[2 marks]

5 These steps can be used to find the volume of a cylinder.

- Square the radius.
- Multiply by 3.14
- Multiply by the perpendicular height.

Use these steps to find the volume when the radius is 3.6 cm and the perpendicular height is 20cm. Give your answer to 3 significant figures.

**[3 marks]**

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Answer \_\_\_\_\_  $cm^3$