Algebra: Quadratics, Rearranging Formulae and Identities Calculator 10 minute test 4

Answer all questions.

1 Tick the statements below that are the same as the answer to $a^8 \times a^4$.

[2 marks]

1 **(a)** $2a^{12}$

1 **(b)** $\dfrac{a^{15}}{a^3}$

1 **(c)** $\dfrac{a^8}{a^4}$

1 **(d)** $(a^4)^3$

2 Factorise $x^2 - 100$

[1 mark]

Answer _____

3 Expand and simplify $(x + 17)(x - 13)$

[2 marks]

Answer _____

4 Show that $(a + b)^2 - 2ab \equiv a^2 + b^2$

[2 marks]

Answer _____

5 Here is a formula: $v = \sqrt{u^2 - 2as}$

Work out the value of v when $u = 5$, $a = 0.5$ and $s = -3$
Give your answer to 3 significant figures.

[3 marks]

Answer _____