Year 9 Algebraic Expressions – Developing

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Year 9 · Maths · Expanding, Index Laws and Algebraic Fractions · Level 2 Developing · 10 questions

Name _____ **Date** _____

A. Use algebra

1. A square photo has sides of x cm. It has a border 5 cm wide all the way round. Write an expanded expression for the total area of the photo and border in cm².

Answer _____

2. A square patio has sides of (x + 3) metres. Write an expanded expression for its area in m².

Answer _____

3. Factorise, then simplify $(a^2 + 7a)/(6a + 42)$.

Answer _____

4. Factorise, then simplify $(y^2 + 6y)/(2y + 12)$.

Answer _____

5. Write an expression for this: find the cube root of n, then multiply by 2.

Answer _____

6. Write an expression for this: square n, then add 4.

Answer _____

7. Expand and simplify $(t - 7)^2$.

Answer _____

8. Simplify $(4y + 2)/2$.

Answer _____

9. Show that $(x + 8)(x + 3) - (x + 8)(x - 3)$ simplifies to $6x + 48$.

Answer _____

10. Chen says $(3x^4)^2 = 3x^8$. Explain the mistake and write the correct answer.

Answer _____