Year 9 Indices and Surds – Foundation

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Year 9 · Maths · Irrational Numbers, Indices and Surds · Level 1 Foundation · 10 questions

Name _____ **Date** _____

A. Indices and roots

1. Write $12^6 \times 12^6$ as a single power of 12.

Answer _____

2. Write $10^4 \div 10^5$ as a single power of 10.

Answer _____

3. Write 8^{-1} as a fraction.

Answer _____

4. Work out $5^5 \times 5^{-6}$. Give your answer as a fraction.

Answer _____

5. Between which two consecutive whole numbers does $\sqrt{23}$ lie?

Answer _____

6. Between which two consecutive whole numbers does $\sqrt{157}$ lie?

Answer _____

7. Which of these numbers are irrational? $\sqrt[3]{100}$, 0.92, $\sqrt{9}$, π, $2 + \sqrt{3}$

Answer _____

8. Find $\sqrt{128}$ correct to 1 decimal place, without a calculator. Use squares of decimals to check.

Answer _____

9. Find n: $5^n \div 5^2 = 5^{-6}$

Answer _____

10. Write these numbers in order of size, smallest first: $\sqrt[3]{840}$, 9.7, $\sqrt{84}$, 59/6

Answer _____