

Practical Maths for Electrical Installation Students & Apprentices

Worksheet 6: Questions

Unit 6: Powers

Name:

Date:

Instructions: Answer all 20 questions. Show your working in the space provided. Answers are given on the final page.

Section A: Understanding Powers

Q1. Evaluate 2^2 .

Working:

Answer:

Q2. Evaluate 3^3 .

Working:

Answer:

Q3. Write $4 \times 4 \times 4$ as a power.

Working:

Answer:

Q4. Evaluate 5^2 .

Working:

Answer:

Section B: Laws of Indices

Q5. Simplify $2^3 \times 2^2$.

Working:

Answer:

Q6. Simplify $5^4 \div 5^2$.

Working:

Answer:

Q7. Simplify $(3^2)^2$.

Working:

Answer:

Q8. Simplify $10^3 \times 10$.

Working:

Answer:

Section C: Negative and Zero Powers

Q9. Evaluate 2^0 .

Working:

Answer:

Q10. Evaluate 10^0 .

Working:

Answer:

Q11. Simplify 5^{-1} .

Working:

Answer:

Q12. Simplify 2^{-3} .

Working:

Answer:

Section D: Electrical Applications

Q13. Calculate $2^2 \times 10$.

Working:

Answer:

Q14. Calculate $3^3 \times 2$.

Working:

Answer:

Q15. A value increases by a factor of 2^3 . What is the factor?

Working:

Answer:

Q16. Simplify $10^2 \times 10^3$.

Working:

Answer:

Section E: Mixed Problems

Q17. Evaluate 4^3 .

Working:

Answer:

Q18. Simplify $2^4 \div 2^2$.

Working:

Answer:

Unit 6: Powers

Q19. Simplify $(5^2) \times (5^3)$.

Working:

Answer:

Q20. Evaluate $3^2 + 4^2$.

Working:

Answer: