



Name _____ Class _____ Date _____

AFTER THIS WORKSHEET YOU CAN

- ✓ Understand: Physical Quantity
- ✓ Understand: Fundamental (Base) Quantities
- ✓ Understand: Derived Quantities
- ✓ Understand: Magnitude and Unit

 Section A • Concept Check • BEGINNER $4 \times 1 = 4$ _____

1 Is 'electric current' a fundamental or derived quantity?

2 Is 'volume' a fundamental or derived quantity?

3 Is 'acceleration' a fundamental or derived quantity?

4 List the seven fundamental (base) quantities in the SI system.

 Section B • Problem Solving • INTERMEDIATE $4 \times 3 = 12$ _____

5 Why is dimensional analysis a useful tool in physics?

6 Is 'density' a fundamental or derived quantity?

7 What makes a quantity 'fundamental' rather than 'derived'?

8 Is 'energy' a fundamental or derived quantity?

 Section C • Challenge • CHALLENGE $2 \times 2 = 4$ _____

9 Why can't you add a quantity in meters directly to a quantity in seconds?

10 Is 'amount of substance' a fundamental or derived quantity?

 Reflection — the most useful thing I learned: _____

✂ ANSWER KEY – FOLD OR CUT BEFORE HANDING OUT

1 = Fundamental 2 = Derived (length³) 3 = Derived (length/time²) 4 = Length, mass, time, electric current, temperature, amount of substance, luminous intensity | 5 = It helps verify that an equation is consistent, catching errors where units on both sides don't match 6 = Derived (mass/volume) 7 = It cannot be expressed in terms of other simpler quantities 8 = Derived | 9 = They measure different physical dimensions and are not compatible for addition 10 = Fundamental