

Name _____

Measurements & Units Test

Part I: Units – Match the following units with the thing that they measure (2 points each)

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|----------------------|----------------------------|
| _____ 1. length | a. meter squared (m^2) |
| _____ 2. volume | b. second (s) |
| _____ 3. mass | c. meter (m) |
| _____ 4. temperature | d. Celsius ($^{\circ}C$) |
| _____ 5. area | e. kilogram (kg) |
| _____ 6. time | f. liter (L) |
7. Which of the unit(s) is/are derived?
8. Which of the unit(s) is/are NOT SI units?

Part II: Prefixes – Match the following prefixes with the appropriate value (2 points each)

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|---------------------|---------------|
| _____ 9. kilo (k) | g. 10^9 |
| _____ 10. pico (p) | h. 10^6 |
| _____ 11. micro (m) | i. 10^3 |
| _____ 12. giga (G) | j. 10^{-2} |
| _____ 13. centi (c) | k. 10^{-3} |
| _____ 14. mega (M) | l. 10^{-6} |
| _____ 15. milli (m) | m. 10^{-9} |
| _____ 16. nano (n) | n. 10^{-12} |

Part III: Metric Conversions – Complete the following conversions with the appropriate significant figures (SHOW ALL WORK)

17. $67,000,000 \text{ pg} = ? \text{ g}$

18. $1.56 \text{ MPa} = ? \text{ kPa}$

19. $5.25 \text{ m} = ? \text{ }\mu\text{m}$

20. $32 \text{ kJ} = ? \text{ cJ}$

Part IV: Non-metric Conversions – Complete the following conversions with the appropriate significant figures (SHOW ALL WORK)

21. $2.5 \text{ gal} = ? \text{ L}$ (1 gal = 2.785 L)

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22. $4.50 \text{ atm} = ? \text{ psi}$ (1 atm = 14.7 psi)

23. $1,040. \text{ J} = ? \text{ cal}$ (1 cal = 4.18 J)

24. $2.50 \text{ km} = ? \text{ ft}$ (1 mi = 1.61 km, 1 mi = 5280 ft)

25. $3.20 \text{ yd} = ? \text{ cm}$ (1 yd = 3 ft, 1 in = 2.54 cm)

26. $3,024 \text{ m} = ? \text{ mi}$ (1 m = 3.28 ft, 1 mi = 5280 ft)

27. $1.3400 \text{ g} = ? \text{ lb}$ (1 kg = 2.20462 lb)

Part V – Significant Figures – perform the following operations with the appropriate significant figures (Show All Work)

28. $26.5862 \text{ L} + 0.17 \text{ L}$

29. $7.1 \times 10^4 \text{ mm} * 2.2654 \times 10^2 \text{ mm}$

30. $129 \text{ g} / 29.2 \text{ mL}$

Bonus: Do the following conversion (SHOW ALL WORK)

You noticed that your pet snail moves 5 mm every 1 minute. How fast is he moving in miles per hour. Express the answer in scientific notation. (5 points)