

HONORS CHEMISTRY MATH SKILLS ASSESSMENT

Write the following numbers in scientific notation.

1. 156.90 _____
2. 12,000 _____
3. 0.0345 _____
4. 0.00890 _____

Expand the following numbers.

5. 1.23×10^8 _____
6. 2.5×10^{-3} _____
7. 1.54×10^4 _____
8. 5.67×10^{-1} _____

Solve the following and put your answer in scientific notation.

9. $\frac{6.6 \times 10^{-8}}{3.3 \times 10^{-4}}$ _____
10. $\frac{7.4 \times 10^{10}}{3.7 \times 10^3}$ _____
11. $(2.67 \times 10^{-3}) - (9.5 \times 10^{-4})$ _____
12. $(1.56 \times 10^{-7}) + (2.43 \times 10^{-8})$ _____
13. $(2.54 \times 10^{-6}) \times (3.0 \times 10^{-7})$ _____
14. $(1.2 \times 10^{-9}) \times (1.2 \times 10^7)$ _____
15. $(2.3 \times 10^4) \times (2.0 \times 10^{-3})$ _____

Carry out the following problems. Include units (if any) with your answer.

16. $\frac{2.647\text{m}}{2.0\text{m}}$ _____
17. $5.25 \text{ L} \times 1.3 \text{ L}$ _____
18. $9.0 \text{ cm} + 7.66 \text{ cm} + 5.44 \text{ cm}$ _____
19. $10.07 \text{ g} - 3.1 \text{ g}$ _____

Solve for x in the following problems.

20. $\frac{3x}{y} = \frac{6g}{b}$ _____

21. $d = \frac{t}{x}$ _____

22. $\frac{2x^2}{3} = dg$ _____

23. $\frac{2\sqrt{x}}{c} = y$ _____

Make the following metric conversions.

24. 4008 g = _____ mg

25. 48 mL = _____ L

26. 239 mm = _____ cm

27. 38 kg = _____ mg

Graphing: Using the graph paper provided, graph the following data from the data chart provided and then

answer the questions. $\text{Velocity} = \frac{\text{distance}}{\text{time}} = \frac{m}{s} = \frac{x}{t}$

Velocity

x (meters)	t (seconds)
0	0
5	1
10	2
15	3
20	4
25	5
30	6
35	7
40	8
45	9
50	10

28. Which is the independent variable?

a) distance b) time

29. Which is the dependent variable?

a) distance b) time

30. What type of graph will this data produce?

31. Using the data from the graph what is the velocity at 60 m?

32. At what time will you have traveled 100 m?

33. At what distance would you be if you traveled for 1 hr.?

34. Using the following relationships, determine the number of weebles in 4.5 blurbs. Show all of your work.

2 zooks = 1 blurb

3 zooks = 2 weebles