

Chapter 2 rev 5

Perform the following operations and state the answer to the correct number of S.F.'s

1. $45.34 \text{ g} + 7.7 \text{ g} =$
2. $45.34 \text{ cd} \times 7.7 \text{ cd} =$
3. $65 \text{ m} + 4.3 \text{ m} + .680 \text{ m} =$
4. $93,000,999 \text{ mi} / 4.1 \text{ min.} =$
5. $6.755 \text{ km} - 4.86 \text{ km} =$
6. $8.000 \text{ g} / 1.2 \text{ ml}$
7. $9.81 \text{ m/s} / .001 \text{ m/s} =$
8. $77 \text{ ml} - 18 \text{ ml}$

List the number of S.F.'s in each measurement

9. $93,000,000 \text{ mi} =$
10. $.0001 \text{ m} =$
11. $0.0002 \text{ ml} =$
12. $9.81 \text{ m/s}^2 =$
13. $8.9 \times 10^3 \text{ km} =$
14. $1,550 \text{ kg} =$

List the uncertainty and percentage of uncertainty of each operation

15. Velocity of a jogger who goes 12 m in 3.0 s? $vel. = d/t$
16. Force applies to a 3.4 kg (mass) box accelerating at 2.0 m/s^2 ? $F = ma$
17. Volume of a ball 5.4 cm in radius? $V = 4/3\pi r^3$

State the absolute and relative error of each example

18. You measure the acceleration to be 9.72 m/s^2 . The accepted value is 9.81 m/s^2 .

Convert the following as indicated

19. $6371 \text{ ml} =$ _____ kl _____ cl _____ MI
20. $0.0637 \text{ kg} =$ _____ cg _____ ng _____ Gg

Round to the stated number of S.F.'s

21. $1.503 \text{ g} =$ _____ (2)
22. 0.004632765 ml _____ (4)
23. $163,014 \text{ kg} =$ _____ (4)
24. $14,370 \text{ g}$ _____ (2)