

Revised August 2011



HONORS WORKSHEET 1a: Significant Figures

- Determine the number of significant figures in each of the following. (6)
 - 0.7680
 - 1230.00
 - 1000.01
 - 120.0
 - 1.09×10^4
 - 0.0080060
- Use a calculator to find the results of the following calculations and then round the answer to the correct number of significant figures. (6)
 - $34.66 + 333.0$
 - $1.23 + 9.66$
 - $445 - 1.22$
 - $18.2 + 1.998$
 - $10.2 - 1.34$
 - $100 - 23$
- State the significant rule that is associated with "captive zeros". (1)
- State the significant rule that is associated with "leading zeros". (1)
- State the significant rule that is associated with "trailing zeros". (1)
- State the significant rule that is associated with addition and subtraction operations. (1)
- State the significant rule that is associated with multiplication and division operations. (1)

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8. Use a calculator to find the results of the following calculations and then round the answer to the correct number of significant figures. (6)
- (a) 12×11.45
 - (b) $(1.23 \times 10^3) \times (6.4 \times 10^2)$
 - (c) 5.233×6.324
 - (d) $34 / 22$
 - (e) $(1.8 \times 10^5) / 14$
 - (f) $100.23 / 5.22$
9. Round each of the following to three significant figures. (6)
- (a) 167.789
 - (b) 0.0000456922
 - (c) 23.00567
 - (d) 3.4569
 - (e) 7903.0005
 - (f) 11.044
10. How many significant figures in each of the following? (6)
- (a) 654.001 nm
 - (b) 6.02×10^{23} particles
 - (c) 1.0079 g
 - (d) 13 neutrons
 - (e) 11.22201 mg
 - (f) 0.004504 g