

Name: _____

Period: _____

Significant Figures and Balancing Equations: Review

How many significant figures do the following numbers have?

- | | | | |
|----------------------------|-------|-----------------------------|-------|
| 1) 1234 | _____ | 11) 0.00030 | _____ |
| 2) 0.023 | _____ | 12) 1020010 | _____ |
| 3) 890 | _____ | 13) 780. | _____ |
| 4) 91010 | _____ | 14) 1000 | _____ |
| 5) 9010.0 | _____ | 15) 918.010 | _____ |
| 6) 1090.0010 | _____ | 16) 0.0001 | _____ |
| 7) 0.00120 | _____ | 17) 0.00390 | _____ |
| 8) 3.4×10^4 | _____ | 18) 8120 | _____ |
| 9) 9.0×10^3 | _____ | 19) 7.991×10^{-10} | _____ |
| 10) 9.010×10^{-2} | _____ | 20) 72 | _____ |

How many significant figures are in each of the following numbers?

- | | | | |
|-------------|-------|---------------------------|-------|
| 1) 5.40 | _____ | 6) 1.2×10^3 | _____ |
| 2) 210 | _____ | 7) 0.00120 | _____ |
| 3) 801.5 | _____ | 8) 0.0102 | _____ |
| 4) 1,000 | _____ | 9) 9.010×10^{-6} | _____ |
| 5) 101.0100 | _____ | 10) 2,370.0 | _____ |

Round these numbers to 3 significant digits.

- 11) 1,566,311
- 12) 2.7651×10^{-3}
- 13) 84,592
- 14) 0.0011672
- 15) 0.07759

Put the following numbers into scientific notation and write down the number of significant digits in each:

a. 0.225

b. 2.5

c. 44,163

d. 20,190

e. 0.00000000000991

f. 7,000

Perform the indicated arithmetic operations, and round the results to the appropriate number of significant digits.

a. $77.981 \times 2.33 =$ _____

b. $4 \times 0.0665 =$ _____

c. $17.34 + 4.900 + 23.1 =$ _____

d. $9.80 - 4.762 =$ _____

e. $3.9 \times 6.05 \times 420 =$ _____

f. $14.1 / 5 =$ _____

g. $1001 + 16.23 =$ _____

h. $424.5 + 2.8461 =$ _____

i. $9.9 - 9.54 =$ _____

j. $7.3778 - 0.000265 =$ _____

k. $8.561 \times 10^9 - 6.21 \times 10^{10} =$ _____

l. $(24.358)(6.4) =$ _____

m. $48.6(0.6959) =$ _____

n. $23081 / 0.8981 =$ _____

o. $(6.082 \times 10^{23})(5.0 \times 10^{-3}) =$ _____

p. $(9.9 \times 10^4) + (1.273 \times 10^2) =$ _____

Balancing on page 3.

Balancing Chemical Equations

Place the appropriate coefficients in the blanks.

