

MEASUREMENTS AND CALCULATIONS

ANSWERS:

PRACTICE PROBLEMS:

IV. How many significant digits are there in each of the following quantities?

a. 20

1, (the zero is NOT significant – a place holder)

b. 1.25×10^7

calculator: 133.75, Both numbers have three significant figures (digits) – therefore our answer will have 3 sig figs... Therefore our answer is: 133

c. $23.33 + 2.4867 - 345.9997 =$

calculator: -340.183, decimal places is our concern with this problem. 23.33 has the fewest number of decimal places. Therefore our answer is: -340.18

d. 50000.

5, (the decimal makes all the zeros significant)

e. 1200.00000

9, (all the zeros are significant since there is a non-zero number to the left of any zero PLUS there is a decimal)

f. 0.0000000321

3, (the zeros are place holders)

g. 1.0000000321

11, (all of the numbers)