

Phys11 Sig Figs : Quiz-60

1) Write in scientific notation to the correct number of sig figs.

- a) 112 kg = _____ g b) 55 cm = _____ m
c) 1 μm = _____ m d) 7 kg = _____ mg
e) 3.1 km² = _____ m²

2) State the number of sig figs : a) 100 _____ b) 0.250 _____

c) 520 _____ d) 0.01702 _____ e) 16000.0 _____

f) 3.40×10^4 _____

3) Write in scientific notation to the correct number of sig figs.

a) 0.000520 = _____ b) 9780100 _____

c) 0.03000 = _____ d) 6400 _____

4) Write in decimal form : 7.81×10^5 _____ 1.4×10^{-3} _____

5) Write in scientific notation to the correct number of sig figs.

a) $10^{-7} \times 10^{18}$ = _____ b) $(4.5 \times 10^3) \times (2.9 \times 10^{-8})$ = _____

c) $(3.1 \times 10^1) \div (7.8 \times 10^{-4})$ = _____

6) Write in decimal notation : a) $18.67 + 0.013 - 2.49$ = _____

b) $2700 - 450$ = _____ c) 2.1×9.37 = _____ d) $431.7 \div 5.18$ = _____

7) The accepted value of a quantity is 8.347 ± 0.0005 . Student A measures 8.20 ± 0.005 and student B measures 8.552 ± 0.0005 .

a) Which students measurement is more precise ? _____

b) Which students measurement is more accurate ? _____

8) Three - hundred and fifty pages of a text book have a thickness of 3.1 ± 0.05 cm. Give the thickness of one page with a suitable uncertainty to the correct number of sig figs.

Answers : 1)a) 1.12×10^5 , b) 5.5×10^{-1} , c) 10^{-6} , d) $7. \times 10^6$, e) 3.1×10^6 ,
2)a) 1, b) 3, c) 2, d) 4, e) 6, f) 3, 3) 5.20×10^{-4} , 9.7801×10^6 ,
 3.000×10^{-2} , 6.4×10^3 , 4) 781000, 0.0014, 5) 10^{11} , 1.3×10^{-4} , 4.0×10^4 ,
6) 16.19, 2200, 20., 83.3, 7)a) B, b)A, 8) $8.9 \times 10^{-3} \pm 5 \times 10^{-5}$ cm (note:
350 is an exact number).