1. C A C B B

6) F D A

7) D F A C

2. 1位　　3位　　5位　　8位　　3位　　3位　　3位　　4位

3. (1) 五位

(2) $(3.169 \pm 0.020) \times 10^4$ kg

(3) (10.43 ± 0.32) cm

(4) (18.55 ± 0.31) cm

(5) (18.7 ± 1.4) cm

(6) $(27.30 \pm 0.20) \times 10^4$ km

(7) $R = 6371$ km $= 6.371 \times 10^6$ m $= 6.371 \times 10^8$ cm

4.　A.

5.　$\rho = \dfrac{4 \times 236.124}{3.14 \times (2.345)^2 \times 8.21} = 6.662568$ g/cm^3

$U_\rho = \sqrt{\left(\dfrac{4}{\pi \times (2.345)^2 \times 8.21} \times 0.004\right)^2 + \left(\dfrac{8 \times 236.124}{\pi \times (2.345)^3 \times 8.21} \times 0.005\right)^2}$

$\quad\quad\quad \overline{+ \left(\dfrac{4 \times 236.124}{\pi \times (2.345)^2 \times (8.21)^2} \times 0.03\right)^2}$

$\quad = \sqrt{1.27386 \times 10^{-8} + 8.0723 \times 10^{-4} + 5.92706 \times 10^{-4}}$

$\quad \approx 0.037$ g/cm^3 故 $\rho = (6.663 \pm 0.037)$ g/cm^3

其中 D 影响最大, H 影响较大, M 影响最小

6.　$g = \left(\dfrac{2\pi}{T}\right)^2 l = \left(\dfrac{2 \times 3.14}{1.8842}\right)^2 \times 0.8768 = 9.7858$ m/s^2

$$U_g = \sqrt{\left(\frac{8\pi^2}{(1.9842)^3} \times 0.9769 \times 0.0005\right)^2}$$

$$+ \left(\frac{4\pi^2}{(1.9842)^2} \times 0.0007\right)^2$$

$$\cong 0.1092884$$

故 $g = (9.79 \pm 0.11) \, m/s^2$

7.

$$d = \frac{0.294 + 0.300 + 0.303 + 0.295 + 0.298 + \cdots \cdots + 0.003}{8}$$

$$\approx 0.300778 \, mm$$

$$t_{0.95,8} \approx 1.859 + \frac{2.40.6}{8 - 1.064} = 2.3059$$

$$U_A = \frac{2.3059}{3} \times \frac{\sqrt{(3.78\times10^{-3})^2 + \cdots \cdots}}{\sqrt{8}}$$

$$= 3.51766 \times 10^{-3} \, mm$$

$U_B = 0.004 \, mm$

$$U = \sqrt{U_A^2 + U_B^2} = 5.3267 \times 10^{-3} \, mm$$

故 $d = (0.301 \pm 0.005) \, mm$