

## 1 Session One - Revision of Basics

### Answers to Workshop Questions

- |   |  |
|---|--|
| (1) $g^5, x^{-1}, y^4, 100$   | (2) 1  |
| (3) between 3 and 4, ( $\approx 3.50$ )   | (4) $\log(24), \log(16)$                           |
| (5) 2.301, 0.602  | (6) 10   |
| (7) 5.3   | (8) $60 \mu\text{C/V}$ or $60 \mu\text{F}$         |
| (9) $24 \times 10^{-3} \text{ J}$   | (10) $64 \times 10^{-9} \text{ m}^3$               |
| (11) $3/4$  | (12) $x = \sqrt{2E/k}$                             |
| (13) $L = \sqrt{2Rd - d^2}$   | (14) 2 or -5, 3 or -0.5, $\pm\sqrt{2}$             |
| (15) $x = 3, y = 4; x = 3, t = 30$  | (16) $64\pi \text{ cm}^2, (256/3)\pi \text{ cm}^3$ |
| (17) $16\pi \text{ cm}^2, 8\pi \text{ cm}$ [note you must have the units in the answer] |  |
| (18) 4 cm, 0.6, 0.8, 1  | (19) 6.92 units                                    |
| (20) 2.4 units  | (21) $\pi/6$                                       |
| (22) 0.173, 1.0, 0.02451, 0.12666   | (23) see notes                                     |
| (24) $ML^{-1}T^{-2}$  | (25) $ML^2T^{-2}$                                  |