

1 Arithmetic and numerical computation

Appropriate units in calculations

Guided questions

- 1 Area of sensor = 5.76×4.29
= 24.7104 mm^2
= 24.7 mm^2
= $2.47 \times 10^1 \text{ mm}^2$
- 2 Number of seconds in a year = number of seconds in a minute \times number of minutes in an hour \times number of hours in a day \times 365
= $60 \times 60 \times 24 \times 365$
= 31 536 000
= $3.15 \times 10^7 \text{ s}$
-

Practice questions

- 3 $120 \text{ pm} = 1.20 \times 10^{-10} \text{ m}$
- 4 $384400 \text{ km} = 384400000 \text{ m} = 3.84 \times 10^8 \text{ m}$ (3 s.f.)
- 5 a 7.83×10^{-4}
b 1.470×10^3
c 5.6×10^{-8}
- 6 distance = speed \times time
= $3.00 \times 10^8 \times 4.24 \times 3.15 \times 10^7$
= $4.01 \times 10^{16} \text{ m}$ (3 s.f.)