

Test Bank for Applied Physics

Applied Physics *Twelfth Edition*

Neill Schurter
P. Erik Gundersen



Test Bank For

Applied Physics, 2025 12th Edition by DalEwen Neill SchurterP Erik Gundersen

Chapter 1-24

Chapter 1 The Physics Tool Kit

1) The metric prefix for 0.010 is _____.

Answer: centi

2) The metric symbol, or abbreviation, for milli is _____.

Answer: m

Write the following number(s) in scientific notation:

3) 45,000

Answer: 4.5×10^4

4) 0.0000742

Answer: 7.42×10^{-5}

Write the following number in decimal form:

5) 3.28×10^{-4}

Answer: 0.000328

6) 2.65×10^8

Answer: 265,000,000

Fill in each blank: (Round to three significant digits when necessary.)

7) 1.2 km = _____ m

Answer: 1200

8) 6.9 L = _____ ml

Answer: 6900

9) 750 μm = _____ mm

Answer: 0.75

10) $670 \text{ mm}^2 = \underline{\hspace{2cm}} \text{ cm}^2$

Answer: 6.7

11) $6500 \text{ cm}^3 = \underline{\hspace{2cm}} \text{ m}^3$

Answer: 0.0065

12) $15 \text{ kg} = \underline{\hspace{2cm}} \text{ lb}$

Answer: 166

96 in. = $\underline{\hspace{2cm}}$ yd

Answer: 2.67

13) $15 \text{ ft}^3 = \underline{\hspace{2cm}} \text{ m}^3$

Answer: 0.425

Determine the accuracy (the number of significant digits) in each measurement:

14) 20,900 m

Answer: 3

15) 0.04060 s

Answer: 4

16) $3.6 \times 10^{-12} \text{ km}$

Answer: 2

Determine the precision of each measurement:

17) 23.9 m

Answer: 0.1 m

18) 14,050 ft

Answer: 10 ft

19) $5.0 \times 10^4 \text{ s}$

Answer: 1000 s

20) Use the rules of measurement to add 18.5 m; 2070 cm; 95.25 cm; 0.045 m.

Answer: 40.2 m

21) Find the area of a rectangle 22.6 m long and 4.60 m wide.

Answer: 104 m^2

22) Find the volume of a rectangular box 18.0 cm long, 9.0 cm wide, and 6.00 cm high.

Answer: 970 cm^3

Express each of the following values using scientific notation:

23) 0.0001042 mi.

Answer: $1.042 \times 10^{-4} \text{ mi}$

24) 6,800,000 in.

Answer: $6.8 \times 10^6 \text{ in.}$

25) 0.00481 L

Answer: $4.81 \times 10^{-3} \text{ L}$

26) 0.000000015 gal

Answer: $1.5 \times 10^{-9} \text{ gal}$

27) 127,500 cm

Answer: $1.275 \times 10^5 \text{ cm}$

28) 0.00008207 km

Answer: $8.207 \times 10^{-5} \text{ km}$

29) 89,600,000 g

Answer: $8.96 \times 10^7 \text{ g}$

30) 18,000 in.

Answer: $1.8 \times 10^4 \text{ in.}$

Perform the following conversion(s):

31) $47.5 \text{ ft}^3 = \underline{\hspace{2cm}} \text{ gal} = \underline{\hspace{2cm}} \text{ L}$

Answer: $355 \text{ gal} = 1340 \text{ L}$

32) $20 \text{ m}^2 = \underline{\hspace{2cm}} \text{ ft}^2 = \underline{\hspace{2cm}} \text{ cm}^2$

Answer: $2380 \text{ ft}^2 = 2,20,000 \text{ cm}^2$