

Worksheet 1.8: Dimensional Analysis (Single Dimensions)

You must show all of your work !

1. $132.5 \text{ cm} = ? \text{ in.}$

2. $3 \text{ m} = ? \text{ in.}$

3. $14 \text{ cm} = ? \text{ m.}$

4. Convert 14 mm to m.

5. Convert 35 kg to g.

6. $116.5 \text{ m} = ? \text{ km}$

7. Convert 57 mL to L

8. Convert 15.9 mm to km.

9. $0.0006394 \text{ km} = ? \text{ m}$

10. Convert 0.0982 mg to kg.

11. $8.4 \times 10^{-6} \text{ g} = ? \text{ mg}$

12. $1.47 \times 10^5 \text{ mm} = ? \text{ km}$

13. $182 \text{ oz} = ? \text{ lb}$

14. Convert $13,455 \text{ g}$ to kg

15. $4.7 \text{ kg} = ? \text{ lb}$

16. $138.4 \text{ oz} = ? \text{ g}$

17. $65.5 \text{ km} = ? \text{ mi}$

18. $23.6 \text{ ft} = ? \text{ cm}$

19. $2.36 \times 10^4 \text{ s} = ? \text{ days}$

20. $13.6 \text{ L} = ? \text{ qt}$

21. $5.00 \text{ km} = ? \text{ ft}$

22. $100.0 \text{ cm} = ? \text{ yd}$

Worksheet 1.9: Dimensional Analysis (Multi-Dimensional)

1. $100. \text{ km/hr} = ? \text{ miles/hr (mph)}$
2. Convert a speed of 35.8 mi/hr to m/s .
3. $80.0 \text{ mph} = ? \text{ mi/s}$
4. $62.3 \text{ mph} = ? \text{ m/s}$
5. $20.6 \text{ km/hr} = ? \text{ mi/hr}$
6. $0.058 \text{ m/s} = ? \text{ cm/s}$
7. Convert a speed of 73.5 km/hr to m/s
8. Convert a speed of 88 m/s to cm/s .
9. $3.49 \text{ km/hr} = ? \text{ m/s}$

10. Convert a density of 4.52 g/mL to kg/L.

11. Convert a speed of 73.5 km/hr to m/s.

12. Convert 0.044 m^3 to cm^3

13. Convert $5.4 \times 10^{-6} \text{ m}^3$ to in^3

14. The speed of light is $3.0 \times 10^{10} \text{ cm/s}$ into miles per hour

15. Convert a density of 13.6 g/mL to lb/ft^3 .

16. $8.05 \times 10^5 \text{ lb/ft}^3 = ? \text{ kg/L}$