

Conversions Practice

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Convert the following. Make sure your final answer is in **significant digits** (and scientific notation if necessary).

1. 2000mm into m.

$$2000 \text{ mm} \times \frac{10^{-3} \text{ m}}{1 \text{ mm}} = 2.000 \text{ m}$$

2.000m

2. 0.05mL into L

$$0.05 \text{ mL} \times \frac{10^{-3} \text{ L}}{1 \text{ mL}} = 0.00005 \text{ L}$$

0.00005L

or
5 × 10⁻⁵ L

3. 30 mg into g.

$$30 \text{ mg} \times \frac{10^{-3} \text{ g}}{1 \text{ mg}} = 0.030 \text{ g}$$

0.030g

4. 0.101mm into cm.

$$0.101 \text{ mm} \times \frac{10^{-3} \text{ m}}{1 \text{ mm}} \times \frac{1 \text{ cm}}{10^{-2} \text{ m}} = 0.0101 \text{ cm}$$

0.0101cm

5. 20m/s into km/hr.

$$20 \frac{\text{m}}{\text{s}} \times \frac{1 \text{ km}}{10^3 \text{ m}} \times \frac{60 \text{ s}}{1 \text{ min}} \times \frac{60 \text{ min}}{1 \text{ hr}} = 72$$

72 km/hr

$$20 \times \left(1 \div 10^{-3}\right) \times 3600$$

6. 35 km/h into m/s.

$$35 \frac{\text{km}}{\text{hr}} \times \frac{10^3 \text{ m}}{1 \text{ km}} \times \left(\frac{1 \text{ hr}}{60 \text{ min}} \right) \times \left(\frac{1 \text{ min}}{60 \text{ s}} \right) = 9.7$$

9.7 m/s

7. 20g into mg.

$$20 \text{ g} \times \frac{1 \text{ mg}}{10^{-3} \text{ g}} = 20000 \text{ mg}$$

20000 mg

$2.0 \times 10^4 \text{ mg}$

8. 43g into kg.

$$43 \text{ g} \times \frac{1 \text{ kg}}{10^3 \text{ g}} = 0.043 \text{ kg}$$

0.043 kg

9. 15 km into mm.
challenge.

$$15 \text{ km} \times \frac{10^3 \text{ m}}{1 \text{ km}} \times \left(\frac{1 \text{ mm}}{10^{-3} \text{ m}} \right) = 15000000$$

$1.5 \times 10^7 \text{ m}$

10. 30.4 cm into hm.
challenge.

$$30.4 \text{ cm} \times \left(\frac{10^{-2} \text{ m}}{1 \text{ cm}} \right) \times \left(\frac{1 \text{ hm}}{10^2 \text{ m}} \right) = 0.00304 \text{ hm}$$

$3.04 \times 10^{-3} \text{ hm}$

11. 12.0 mL into L.

$$12.0 \text{ mL} \times \frac{10^{-3} \text{ L}}{1 \text{ mL}} = 0.0120 \text{ L}$$

0.0120 L