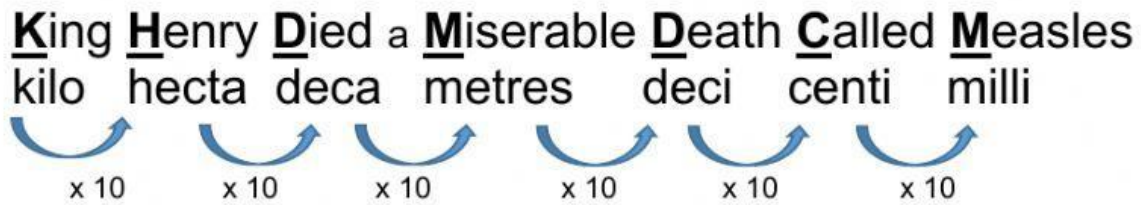


Conversion of Units



(e.g. kilometres, hectametres, decametres, metres, decimetres, centimetres and millimetres.)

Converting from one unit to the next one, **x 10** as you move to the right OR **÷10** as you move to the left. If you start with kilometres and want to convert to metres, you would need to $\times 10 \times 10 \times 10$, or $\times 1000$. If you convert from millimetres to metres, you $\div 10 \div 10 \div 10$, or $\div 1000$.

Question 5

Convert the following (write your answer as a number with units; no spaces, e.g. 100m):

- 5.1) 100 cm to m
- 5.2) 2000 mm to m
- 5.3) 45 dm to m
- 5.4) 50 cm to m
- 5.5) 600 dm to m
- 5.6) 90 mm to m
- 5.7) 30 cm to m
- 5.8) 80 dm to km
- 5.9) 6000 m to km
- 5.10) 3400 mm to km

Question 6

- 6.1) 2 hectametres to m
- 6.2) 450 km to mm
- 6.3) 9003 hectametres to cm
- 6.4) 7699 m to cm
- 6.5) 8560 km to cm
- 6.6) 654 m to dm
- 6.7) 20 dm to cm
- 6.8) 5008 cm to mm
- 6.9) 0,88 dm to m
- 6.10) 0,7 km to m
- 6.11) 2 Dm to cm
- 6.12) 40 Dm to m
- 6.13) 20 mm to Dm

Question 7

1 kg = 1000 g kg $\rightarrow$ g $\times$ 1000 g $\rightarrow$ kg $\div$ 1000
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- 7.1) 20 g to kg
- 7.2) 600 g to kg

7.3) 5000 g to kg

7.4) 70 kg to g

7.5) 9 kg to g

7.6) 800 kg to g

7.7) 7579 g to kg

7.8) 0,4 kg to g

7.9) 0,02 g to kg

7.10) 0,005 kg to g

Question 8: Area

$$\begin{array}{l} \text{cm}^2 \rightarrow \text{m}^2 \\ \div 100^2 \end{array}$$

Note: because the unit is **squared**, each jump must be 10^2 , not just 10

8.1) 40 cm^2 to m^2

8.2) 30 mm^2 to m^2

8.3) 55 dm^2 to m^2

8.4) 3 km^2 to m^2

8.5) 65 mm^2 to km^2

8.6) 50 cm^2 to dm^2

8.7) 320 m^2 to cm^2

8.8) 400 km^2 to dm^2

8.9) 0,003 m^2 to mm^2

8.10) 0,002 dm² to cm²

Question 9 : Volume

1 litre (l) = 1000 ml X 1000

9.1) 70 l to ml

9.2) 400 ml to l

9.3) 30 ml to l

9.4) 600 l to ml

9.5) 505 l to ml

9.6) 980 ml to l

9.7) 2000 l to ml

9.8) 8000 ml to l

Question 10

cm ³ → dm ³ ÷ 10 ³
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Note: because the unit is **cubed**, each jump must be 10³, not just 10

10.1) 30 dm³ to cm³

10.2) 900mm³ to dm³

10.3) 450 km³ to m³

10.4) 0,2 m³ to mm³

10.5) 20 dm³ to cm³

10.6) 68 mm^3 to dm^3

10.7) $0,5 \text{ m}^3$ to cm^3

10.8) $0,02 \text{ km}^3$ to mm^3

Question 11

$1 \text{ dm}^3 = 1 \text{ litre}$	$1 \text{ cm}^3 = 1 \text{ ml}$
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11.1) 20 dm^3 to l

11.2) $0,5 \text{ l}$ to dm^3

11.3) 400 l to dm^3

11.4) $0,75 \text{ l}$ to dm^3

11.5) 2 dm^3 to l

11.6) 300 cm^3 to dm^3

11.7) 80 cm^3 to l

11.8) $0,5 \text{ mm}^3$ to l

11.9) 87 l to cm^3

11.10) 90 l to mm^3

Question 12

Sometimes a prefix is added to a unit to make it much bigger or much smaller:

Prefix	
mega (M)	$\times 10^6$
giga (G)	$\times 10^9$
Tera (T)	$\times 10^{12}$

micro (μ)	$\times 10^{-6}$
nano (n)	$\times 10^{-9}$
pico (p)	$\times 10^{-12}$

e.g. $600 \mu\text{m} = 600 \times 10^{-6} \text{ m}$

(This could be further simplified to $6,00 \times 10^{-4} \text{ m}$.)

Write all scientific notation with no spaces and using ^ for the exponent. e.g. $6,00 \times 10^{-4}$

12.1) 20 μm to m

12.2) 4 pm to m

12.3) 45 nm to m

12.4) 0,3 pm to m

12.5) 78 μm to m

12.6) 80 pm to m

12.7) 50 nm to m

12.8) 0,06 μm to m

12.9) 300 pm to m

12.10) 2 Tm to m

12.11) 80 Gm to m

12.12) 0,3 Mm to m

12.13) 800 m to pm

12.14) 90 m to μm

12.15) 780 m to nm

12.16) 330 μm to m