

Review the chart of common metric lengths:

Prefix	Example	Symbol
kilo	kilometre	km
---	metre	m
deci	decimetre	dm
centi	centimetre	cm
milli	millimetre	mm

Examples

1. Which of the above measurements is the LARGEST? _____
2. Which of the above measurements is the SMALLEST? _____
3. If you wanted to find out how many millimetres are in 13m, would you expect the answer to be SMALLER or LARGER than 13?

The answer would be much LARGER, since each mm is tiny, and it would take many of them to equal 1m.

4. If you wanted to find out how many centimeters are in 26m, would you expect the answer to be SMALLER or LARGER than 26?

Once again, the answer would be LARGER, since each cm is much smaller than 1m.

TRICK – WHEN YOU NEED TO CONVERT TO A UNIT FARTHER DOWN THE CHART, THE ANSWER WILL BE LARGER THAN THE ORIGINAL NUMBER. THIS MEANS WE MULTIPLY!

To convert FROM km: $1\text{km} = 1000\text{m} = 10\,000\text{dm} = 100\,000\text{cm} = 1\,000\,000\text{mm}$

To convert FROM m: $1\text{m} = 10\text{dm} = 100\text{cm} = 1000\text{mm}$

To convert FROM dm: $1\text{dm} = 10\text{cm} = 100\text{mm}$

To convert FROM cm: $1\text{cm} = 10\text{mm}$

Examples

1. Convert 2.635m to cm –
In the second line of the chart, we see that $1\text{m} = 100\text{cm}$.
So we multiply by 100
 $2.635\text{ m} \times 100 = 263.5\text{ cm}$

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To convert FROM cm: $1\text{cm} = 10\text{mm}$

Examples

1. Convert 2.635m to cm –
In the second line of the chart, we see that $1\text{m} = 100\text{cm}$.
So we multiply by 100
 $2.635\text{ m} \times 100 = 263.5\text{ cm}$
2. Convert 3.9km to dm –
In the first line of the chart, $1\text{km} = 10,000\text{dm}$.
So we multiply by 10 000
 $3.9 \times 10\,000 = 39\,000\text{ dm}$

TRICK – WHEN YOU NEED TO CONVERT TO A UNIT FARTHER UP THE CHART, THE ANSWER WILL BE SMALLER THAN THE ORIGINAL NUMBER. THIS MEANS WE DIVIDE!

3. Convert 2573mm to dm-
In the third line, $1\text{dm} = 100\text{mm}$.
So we divide by 100
 $2573 \div 100 = 25.73\text{dm}$
4. Convert 4.8cm to km
In the first line, $1\text{km} = 100,000\text{cm}$.
So we divide by 100 000
 $4.8 \div 100\,000 = 0.000048\text{km}$

Practice Problems

Fill in the blanks below using the charts provided.

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To convert FROM cm: $1\text{cm} = 10\text{mm}$

1. Going DOWN the chart

a) $8.27\text{m} = \underline{\hspace{2cm}}\text{mm}$

d) $683.7\text{km} = \underline{\hspace{2cm}}\text{m}$

b) $123.65\text{km} = \underline{\hspace{2cm}}\text{cm}$

e) $50.98\text{m} = \underline{\hspace{2cm}}\text{dm}$

c) $4.92\text{dm} = \underline{\hspace{2cm}}\text{cm}$

f) $4\text{km} = \underline{\hspace{2cm}}\text{mm}$

2. Going UP the chart

g) $37\text{mm} = \underline{\hspace{2cm}}\text{cm}$

j) $18.6\text{cm} = \underline{\hspace{2cm}}\text{km}$

h) $215.3\text{dm} = \underline{\hspace{2cm}}\text{m}$

k) $9.27\text{mm} = \underline{\hspace{2cm}}\text{m}$

i) $764.09\text{m} = \underline{\hspace{2cm}}\text{km}$

l) $1563\text{dm} = \underline{\hspace{2cm}}\text{km}$

3. (The following practice questions will be a mix – Some go UP and some go DOWN the chart!)

m) $17.68\text{m} = \underline{\hspace{2cm}}\text{cm}$

p) $312.5\text{cm} = \underline{\hspace{2cm}}\text{dm}$

n) $603.4\text{dm} = \underline{\hspace{2cm}}\text{mm}$

q) $7.68\text{km} = \underline{\hspace{2cm}}\text{mm}$

o) $91\text{m} = \underline{\hspace{2cm}}\text{km}$

r) $5.6\text{mm} = \underline{\hspace{2cm}}\text{m}$