

Powers of 10 Homework



No calculator!

Literacy

10^2 means "ten to the power 2"

(Also known as "ten squared": 100)

10^3 means "ten to the power 3"

(Also known as "ten cubed": 1000)

Research

1000 metres = 1 **kilometre**

1000 **millimetres** = 1 metre

1000 ___ metres = 1 **millimetre**

1000 ___ metres = 1 ___ metre

Memory

Learn these rules:

$\times 10$ and $\div 0.1$ mean the same:

Scale up to 10 times the size

$\times 0.1$ and $\div 10$ mean the same:

Scale down to $\frac{1}{10}$ of the size

Skills

Work out the answers to:

a) $15.2 \times 10 =$

b) $22.4 \times 100 =$

c) $1303 \div 100 =$

d) $230.244 \div 100 =$

e) $10.143 \times 0.1 =$

f) $3.142 \times 0.01 =$

g) $14.2 \div 0.1 =$

h) $0.03 \div 0.001 =$

Stretch

Find the value of:

a) $13.4 \times 10^3 =$

b) $0.34 \times 10^7 =$

c) $12.12 \div 10^4 =$

d) $13 \times 10^{-2} =$

Powers of 10 Homework SOLUTIONS



No calculator!

Literacy

10^2 means "ten to the power 2"

(Also known as "ten squared": 100)

10^3 means "ten to the power 3"

(Also known as "ten cubed": 1000)

Research

1000 metres = 1 kilometre

1000 millimetres = 1 metre

1000 micrometres = 1 millimetre

1000 nanometres = 1 micrometre

Or

1000 picometres = 1 nanometre

Memory

Learn these rules:

$\times 10$ and $\div 0.1$ mean the same:

Scale up to 10 times the size

$\times 0.1$ and $\div 10$ mean the same:

Scale down to $\frac{1}{10}$ of the size

Skills

Work out the answers to:

i) $15.2 \times 10 = 152$

j) $22.4 \times 100 = 2240$

k) $1303 \div 100 = 13.03$

l) $230.244 \div 100 = 2.30244$

m) $10.143 \times 0.1 = 1.0143$

n) $3.142 \times 0.01 = 0.03142$

o) $14.2 \div 0.1 = 142$

p) $0.03 \div 0.001 = 30$

Stretch

Find the value of:

e) $13.4 \times 10^3 = 13400$

f) $0.34 \times 10^7 = 3400000$

g) $12.12 \div 10^4 = 0.001212$

h) $13 \times 10^{-2} = 0.13$