UNIT 1 *Indices* Overhead Slides

Overhead Slides

1.1 Square, Cube, Square Roots, Cube Roots
1.2 Time Scale
1.3 Space Scale
1.4 Multiples

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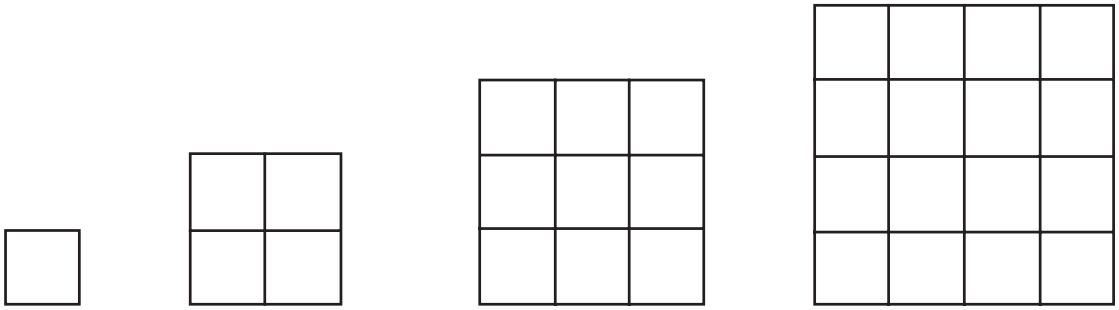
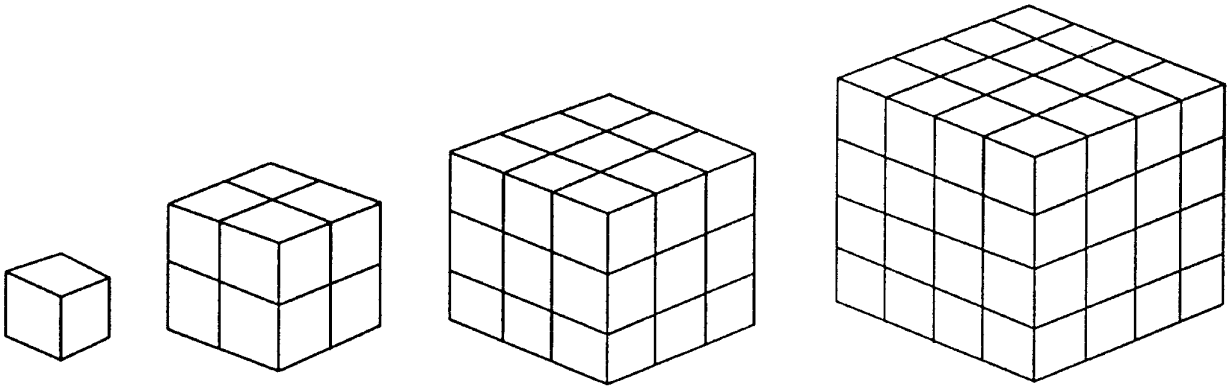
OS 1.1 *Squares, Cubes, Square Roots, Cube Roots*



1 **4** **9**

(1×1) (2×2) (3×3)

1^2 2^2 3^2



1 **8** **27**

$(1 \times 1 \times 1)$ $(2 \times 2 \times 2$ $(3 \times 3 \times 3)$

1^3 2^3 3^3

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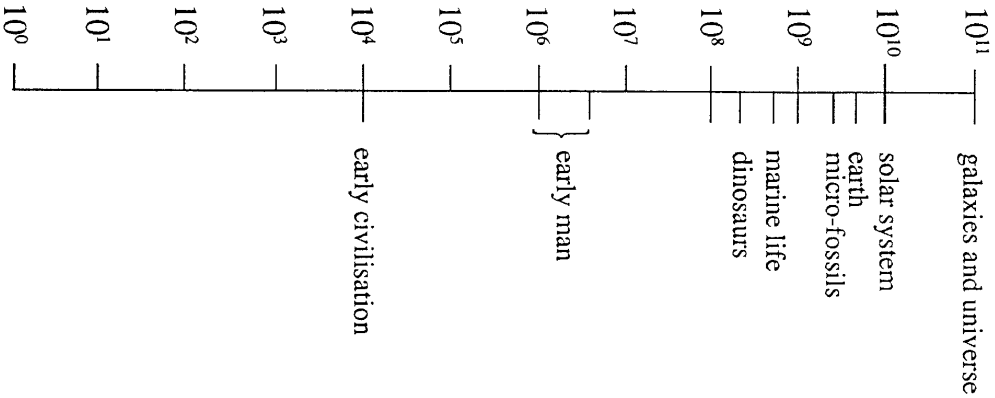
OS 1.2 *Time Scale*

Galaxies and universe formed	10^5 million years ago
Solar system formed	10^4 million years ago
Micro fossils formed	3.2×10^3 million years ago
Marine evolution	6×10^2 million years ago
Early man evolved	4 to 1 million years ago
Early civilisation began	10^4 years ago

Non-linear Scale



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OS 1.3 *Space Scale*

Radius of visible universe	10^{23} km
Distance of nearest galaxy	10^{19} km
Distance of nearest star	10^{14} km
Distance of sun	1.5×10^{8} km
Distance of moon	4.0×10^{5} km
Highest mountains on earth	8.8 km
Human dimensions	2 m
Atomic radius	10^{-8} km
Nuclear radius	10^{-13} km

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OS 1.4 *Multiples*

Prefix	Abbreviation	Multiple
mega	M	10^{6}
kilo	k	10^{3}
deci	d	10^{-1}
centi	c	10^{-2}
milli	m	10^{-3}
micro	μ	10^{-6}
nano	n	10^{-9}

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