dimensional analysis

introduction

Dimensional analysis

Sort the following

- all lower case letters represent lengths
- π and θ are constants

$\frac{\theta}{360} \times 2\pi r$	πr^2	$\frac{a+b}{2} \times h$	x^3
$\frac{1}{3}\pi r^2 h$	$2(l+w)$	$\frac{abd}{2}$	$8p$
πd	$\frac{ab}{2}$	$\frac{4}{3}\pi r^3$	$4\pi r^2$

Dimensional analysis

Solution

length	πd	$\frac{\theta}{360} \times 2\pi r$	$2(l + w)$	$8p$
area	πr^2	$\frac{ab}{2}$	$\frac{a + b}{2} \times h$	$4\pi r^2$
volume	$\frac{1}{3}\pi r^2 h$	$\frac{abd}{2}$	$\frac{4}{3}\pi r^3$	x^3

Dimensional analysis

Extension

Draw diagrams to represent each of the formulae from the previous activity