

## **Maths with Graham**

Basic Maths made easy!

## **Beer Keg Maths**

In this exercise you need to know the formula for the volume of a cylinder.

 $V = \pi r^2 h$  where V is the volume, r is the radius and h is the height. Use the  $\pi$  button on your scientific calculator so that your answers are accurate.

You also need to know that 1 inch = 2.54 cm and 1000cm<sup>3</sup> = 1 litre.

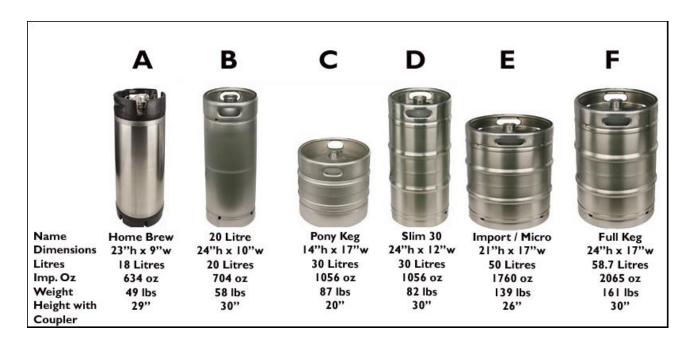
1 litre = 1.76 pints.

The diagram shows the sizes of some common beer kegs.

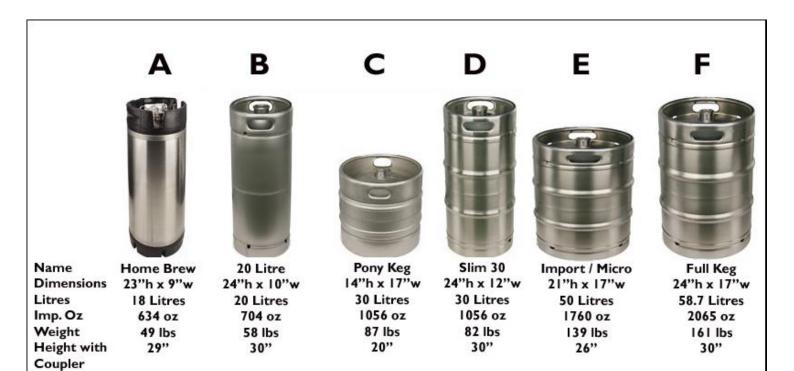
W is the width of the keg. This is also the diameter.

What is the capacity of each keg in pints? Calculate the volume of each keg and compare this with the given capacity in litres. Round your answers to the nearest tenth of a litre. Do the answers match? Explain why or why not.

Challenge. Which keg holds most beer compared to its volume? Use the table overleaf for your answers.







Keg	A	В	C	D	E	F
Capacity						
(pints) (To 2 decimal places)						
Radius						
CM (To 2 decimal places)						
Volume						
cm <sup>3</sup> (to nearest whole number)						
Volume						
Litres (to nearest 0.1						
% of						
volume						
that is						
beer (to nearest whole number)						