

The Brent pipe line is approximately 240 miles long = 386.2km.

The diameter of the end of the pipe is 36 inches = 91.4cm

The area of the pipe is  $\pi r^2$  6561 cm<sup>2</sup>

$$\begin{aligned}\text{The volume of the pipe} &= \text{Area} \times \text{Length} \\ &= (6561 \times 38620000) \text{ cm}^3 \\ &= 253385820000 \text{ cm}^3 \\ &= 250000000000 \text{ (correct to 2 significant figures)} \\ &= (2.5 \times 10^{11}) \text{ cm}^3 \text{ (in scientific notation)}\end{aligned}$$

Number of litres of crude oil in pipe = 253385820 litres

Approximate 46% of crude oil in pipe is petrol = 116557477.2 litres of petrol

If Bayhead shop sold this petrol at £1 per litre...

71% goes to the government = £ 82,755,808. 81

29% for the actual petrol = £ 33,801,668.57