The Price of Fuel

The price you pay for your petrol is made up of duty, the cost of producing the product, VAT and retailer costs.
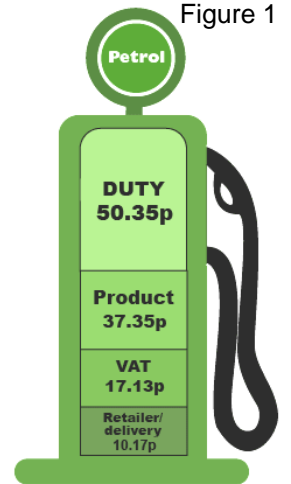If petrol costs 115.0p a litre this petrol pump (Fig 1) shows how much each of these would be worth.

Fuel is sold by the litre and prices are shown in pence. Discuss this pricing strategy and the value of *all the digits* in the prices. E.g. in 120.3p per litre, what does each digit mean?

Figure 2 shows some typical prices of the various types of petrol sold in the Berkshire area in May 2008.

Figure 1

Petrol

DUTY 50.35p

Product 37.35p

VAT 17.13p

Retailer/ delivery 10.17p

www.petrolprices.com/

	Unleaded	Diesel	LRP	Super	LPG
A	117.9p	129.9p	113.9p	124.9p	59.9p
B	113.9p	125.9p	113.9p	120.3p	59.0p
C	110.9p	120.9p	113.9p	114.9p	56.9p

Figure 2

1a] Which row shows the highest prices? _____

1b] Which row shows the lowest prices? _____

2a] Which is the cheapest kind of fuel you can buy? _____

2b] Can you give a reason why not very many people chose LPG fuel?

_____

The difference between the highest and lowest price is the range. The greater the range is, the less consistent the price.

3a] Which is the most consistent fuel price according to the table above?

_____

3b] Which is the least consistent fuel price according to the table above?

_____

The Price of Fuel

4] Give the cost of buying 10 litres of fuel at 109.9p per litre.

The prices of fuel at 3 stations in your local area are shown below.

109 89	111 1	110 9

5] Write the prices in ascending order.   _____ _____ _____

6a] Complete the table below

	10 litres costs
(Shell)	
(Texaco)	
TESCO	

6b] How much extra would you pay for 10 litres of the most expensive compared to the cheapest?

_____

6c] How much extra would you pay for 10 litres of the most expensive rather than the second most expensive?

_____

Use the price given in Figure 1 for the next question (115.0p a litre).

7] If you fill up with 20 litres of fuel every 2 weeks how much fuel will you use in a year?

_____

The Price of Fuel - Answers

E.g. in 120.3p per litre, what does each digit mean?

1 = 100 pence (£1), 2 = 20p (2 'tens'), 0 = 0p (no 'units'), 3 = 3/10 penny. Note that the decimal point separates whole pence from tenths of a penny NOT pounds from pence!

	Unleaded	Diesel	LRP	Super	LPG
A	117.9p	129.9p	113.9p	124.9p	59.9p
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C	110.9p	120.9p	113.9p	114.9p	56.9p

Figure 2

1a] Which row shows the highest prices?   Row A

1b] Which row shows the lowest prices?   Row C

2a] Which is the cheapest kind of fuel you can buy? LPG

2b] Can you give a reason why not very many people chose LPG fuel? Expensive to get cars converted?

3a] Which is the most consistent fuel price according to the table above? LRP (range = 0)

3b] Which is the least consistent fuel price according to the table above? Super (range = 124.9 – 114.9 = 10p)

4] Give the cost of buying 10 litres of fuel at 109.9p per litre. 1099p = £10.99

The price of fuel at 3 stations in your local area is shown below.

Shell	Texaco	TESCO
109⁸⁹	111¹	110⁹

5] Write the prices in ascending order.   109.89p   110.90p   111.10p

6a] Complete the table below

	10 litres costs
Shell	1098.9p £10.99
Texaco	1111p £11.11
TESCO	1109p £11.09

6b] How much extra would you pay for 10 litres of the most expensive compared to the cheapest? £11.11 - £10.99 = £0.12

6c] How much extra would you pay for 10 litres of the most expensive rather than the second most expensive? £11.11 - £11.02 = £0.09

Use the price given in Figure 1 for the next question (115.0p a litre).

7] If you fill up with 20 litres of fuel every 2 weeks how much fuel will you use in a year?

£1.15 x 20 x 26 = £2.30 x 10 x 26 = £23 x 26 = £598.00

N2/L1.4 Read, write, order and compare decimals up to three places. N2/L1.5 Add, subtract, multiply and divide decimals up to two places. N2/L1.6 Multiply and divide decimals by 10 and 100. HD1/L1.4 Find the range for a set of data.