

YEAR 11 MINI-ASSESSMENT 5
FOUNDATION – CONTEXTUAL QUESTIONS

1. Jan writes down **one** multiple of 9 **and two** different factors of 40
Jan adds together her three numbers.
Her answer is greater than 20 but less than 30
Find three numbers that Jan could have written down.

[3 marks]

2. Sam buys 20 boxes of oranges. There are 25 oranges in each box.
Each box of oranges costs £7
Sam sells $\frac{2}{5}$ of the oranges he bought. He sells each of these oranges for 40p.
He then sells all of the remaining oranges at 3 oranges for 50p.
Did Sam make a profit or did Sam make a loss?
You must show working to justify your answer.

[5 marks]

3. Henry is thinking of having a water meter.
These are the two ways he can pay for the water he uses.

Water Meter

A charge of £28.20 per year

plus

91.22p for every cubic metre of water used

1 cubic metre = 1000 litres

No Water Meter

A charge of £107 per year

Henry uses an average of 180 litres of water each day.
Should Henry have a water meter? Justify your answer mathematically.

[4 marks]