Q1   A car costs £7800 plus 20% VAT.

I pay a deposit of £2400 and the rest of my bill in 12 equal monthly payments.

How much is each monthly payment?

Total cost 7800×1.20 =   9360

$$\frac{2400-}{6960}$$

Monthly Payments = $6960 \div 12$

= £580

Q2a   Write 420 as a product of its prime factors.

$$\begin{array}{r|r} 2 & 420 \\ \hline 2 & 210 \\ \hline 3 & 105 \\ \hline 5 & 35 \\ \hline 7 & 7 \\ \hline & 1 \end{array}$$

2, 3, 5, 7

$$420 = 2 \times 2 \times 3 \times 5 \times 7$$

Q2b   Find the HCF of 420 and 90.

$$\begin{array}{r|r} 2 & 90 \\ \hline 3 & 45 \\ \hline 3 & 15 \\ \hline 5 & 5 \\ \hline & 1 \end{array}$$

$$90 = \textcircled{2} \times \textcircled{3} \times 3 \times \textcircled{5}$$

$$420 = \textcircled{2} \times 2 \times \textcircled{3} \times \textcircled{5} \times 7$$

$$HCF = 2 \times 3 \times 5$$
$$= 30$$

Q3 A Number 15 bus leaves the bus station every 15 minutes.

A Number 18 bus leaves the bus station every 18 minutes.

A Number 15 and a Number 18 both leave together at 4.00 pm.

What time will they next leave the bus station together?

15	18
30	36
45	54
60	72
75	(90)
(90)	108

90 minutes after 4 pm

so   5.30 pm