1 Write 40 as a product of its prime factors.

(2 marks)

2 Write 72 as a product of its prime factors.

(2 marks)

3 Write 98 as a product of its prime factors.

(2 marks)

4 Write 240 as a product of its prime factors.

(2 marks)

5 Find the highest common factor (HCF) of 60 and 114

(3 marks)

6 Find the lowest common multiple (LCM) of 120 and 150

(3 marks)

7 Find the highest common factor (HCF) of 84 and 120

(3 marks)

8 Find the lowest common multiple (LCM) of 70 and 56

(3 marks)

9 Two buses, bus A and bus B, both use the same bus stop.

Bus A runs every 10 minutes.
Bus B runs every 14 minutes.

Both buses are at the bus stop at 11 am.

What time will both buses next both be at the bus stop.

(3 marks)

10 Light **A** flashes every 8 seconds.
Light **B** flashes every 20 seconds.

Both lights flash at the same time.

Work out how long it will take for both lights to flash at the same time again.

(3 marks)

11 $648 = 2^3 \times 3^4$ $540 = 2^2 \times 3^3 \times 5$

(a) Write down the highest common factor (HCF) of 648 and 540.

(b) Find the lowest common multiple (LCM) of 648 and 540.

(3 marks)

12 $\mathbf{A} = 2^2 \times 3 \times 5^2$ $\mathbf{B} = 2^3 \times 3^2 \times 7$

(a) Write down the highest common factor (HCF) of **A** and **B**.

(b) Find the lowest common multiple (LCM) of **A** and **B**.

(3 marks)

13 Find the lowest common multiple (LCM) of 12, 15 and 18.

(3 marks)

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14 Light **A** flashes every 5 seconds.
Light **B** flashes every 6 seconds.
Light **C** flashes every 7 seconds.

All three lights flash at the same time.

Work out how long it will take for all three lights to flash at the same time again.

(3 marks)

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15 Find the highest common factor (HCF) of 72, 90 and 126

(3 marks)

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16 Kenny is thinking of two numbers **greater than 10**.

He says:
”The highest common factor (HCF) of my two numbers is 7
The lowest common multiple (LCM) of my two numbers is 84”

Write down the two numbers that Kenny is thinking of.

(3 marks)
