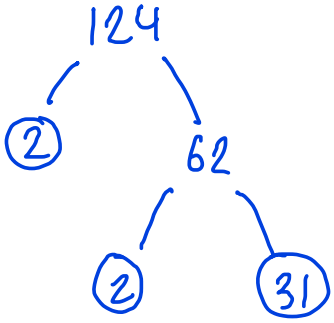
1 Write 124 as a product of its prime factors.



$$\begin{array}{r} 062 \\ 2\overline{)124} \end{array}$$

$$\begin{array}{r} 31 \\ 2\overline{)62} \end{array}$$

31 is prime.

$124 = 2 \times 2 \times 31$

$= 2^2 \times 31$ (2)

$2^2 \times 31$

(Total for Question 1 is 2 marks)

2 Write down two factors of 35

7 x 5 = 35

7 and 5 (1)

(Total for Question 2 is 1 mark)

3 Write down a 3 digit number that is a multiple of 5

Any number ending in
0 or 5 is a multiple of 5.

(1)

125

(Total for Question 3 is 1 mark)

4 Write down two factors of 12

Any 2 from 1, 2, 3, 4, 6 and 12

1 x 12

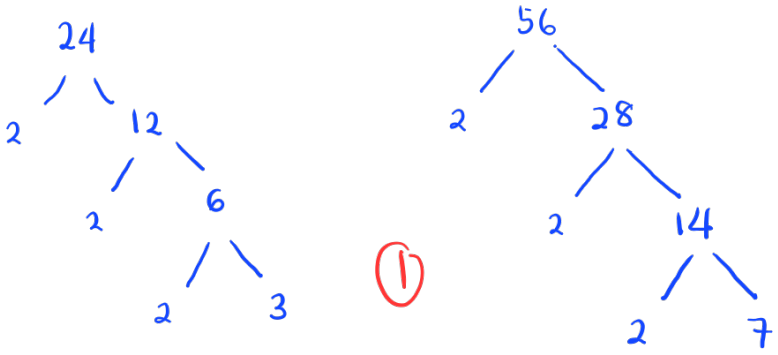
2 x 6

3 x 4

3 4 (1)

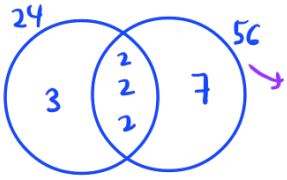
(Total for Question 4 is 1 mark)

5 Work out the lowest common multiple (LCM) of 24 and 56



(1)

LCM = 2 x 2 x 2 x 3 x 7
= 8 x 3 x 7
= 24 x 7
= 168



multiply all factors in the Venn Diagram

168 (1)

(Total for Question 5 is 2 marks)

6 Write down a factor of 60 that is between 8 and 14

List down factor of 60 from smallest to largest

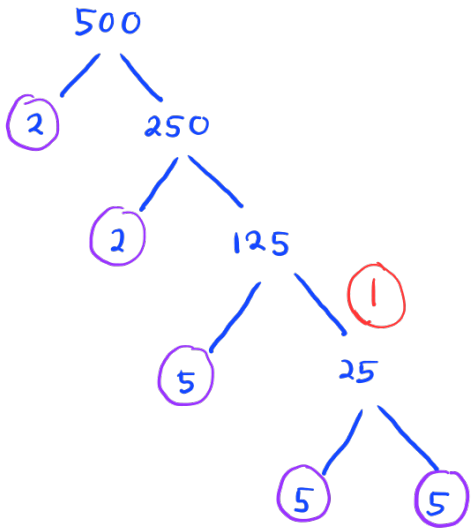
1 x 60 = 60
2 x 30 = 60
3 x 20 = 60
4 x 15 = 60
5 x 12 = 60
6 x 10 = 60

choose factor that is between 8 and 14

10 (1)

(Total for Question 6 is 1 mark)

7 Write 500 as a product of powers of its prime factors.



$2 \times 2 \times 5 \times 5 \times 5 = 2^2 \times 5^3$ (1)

(1)

$2^2 \times 5^3$

(Total for Question 7 is 3 marks)

8 Here is a list of numbers.

5 11 18 22 29

From the list, write down a multiple of 3

Find which of the numbers are divisible by 3 :

$5 \div 3$ $18 \div 3 = 6$ $29 \div 3$

$11 \div 3$ $22 \div 3$

18 (1)

(Total for Question 8 is 1 mark)

9 Write down **three** different factors of 20

factor = a number that can divide into it

all factors:
$1 \times 20 = 20$
$5 \times 4 = 20$
$10 \times 2 = 20$

✓✓ (2)

1 , 5 , 20

(Total for Question 9 is 2 marks)

10 Here is a list of numbers.

20 40 60 80 100

One of these numbers is a multiple of 25

Which number?

$25 \times 2 = 50$

$25 \times 3 = 75$

$25 \times 4 = 100$ (1)

100

(Total for Question 10 is 1 mark)

11 Write 60 as a product of its prime factors.

1 x 60
2 x 30 → 2 x 3 x 2 x 5
3 x 20 → 3 x 2 x 2 x 5
4 x 15
5 x 12 → 5 x 2 x 2 x 3
6 x 10

answers are the same either choice

2 x 2 x 3 x 5 (1)

(Total for Question 11 is 2 marks)

12 A and B are numbers such that

$$A = 2^2 \times 3^4 \times 7$$
$$B = 3^2 \times 7^2$$

(a) Find the highest common factor (HCF) of A and B.

List all the factors of A and B :

A : 2 x 2 x (3) x (3) x 3 x 3 x (7)

B : (3) x (3) x (7) x 7

Circle all common factors of A and B.

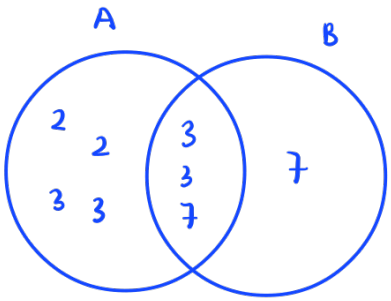
Multiply all the common factors to get HCF :

3 x 3 x 7 = 63

63 (1)

(1)

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



LCM : 2 x 2 x 3 x 3 x 3 x 3 x 7 x 7

: $2^2 \times 3^4 \times 7^2$ (1)

: 15 876 (1)

15 876

(2)

(Total for Question 12 is 3 marks)