



Name: _____ **Date:** _____ **Score:** _____ / 36

- 1** a. Write down the first ten prime numbers.
b. Explain why 2 is the only even prime number.
c. Here is a list of numbers.
21 31 39 41 51
Write down the numbers from the list that are prime.

(3 marks)

Answer _____

- 2** Find two prime numbers that add together to make 32.

(2 marks)

Answer _____

- 3** a. Write down all the factor pairs of 60.
b. Write down all the common factors of 60 and 42.

(3 marks)

Answer _____

- 4** Find the highest common factor (HCF) of 54 and 90

(2 marks)

Answer _____

- 5 a. Find the two common multiples of 6 and 8 that are between 50 and 100.
b. Find the lowest common multiple (LCM) of 4, 6 and 10.

(3 marks)

Answer _____

- 6 Write 264 as a product of its prime factors.

(2 marks)

Answer _____

- 7 a. Write 600 as a product of its prime factors. Give your answer in index form.
b. Hence write 1200 as a product of its prime factors in index form.

(3 marks)

Answer _____

- 8 Priya has two ribbons. One is 84 cm long and the other is 126 cm long.
She cuts both ribbons into pieces that are all the same length, with no ribbon left over. She wants the pieces to be as long as possible.

- a. Work out the length of each piece.
b. How many pieces does she get altogether?

(3 marks)

Answer _____

9

Nadia is making table decorations.

Each decoration needs one candle and one holder.

Candles are sold in packs of 9

Holders are sold in packs of 12

Nadia buys exactly the same number of candles as holders, with none left over.

Work out the smallest number of packs of candles and the smallest number of packs of holders she can buy.

(3 marks)

Answer _____

10

a. Find the highest common factor (HCF) of 72 and 120

b. Find the lowest common multiple (LCM) of 72 and 120

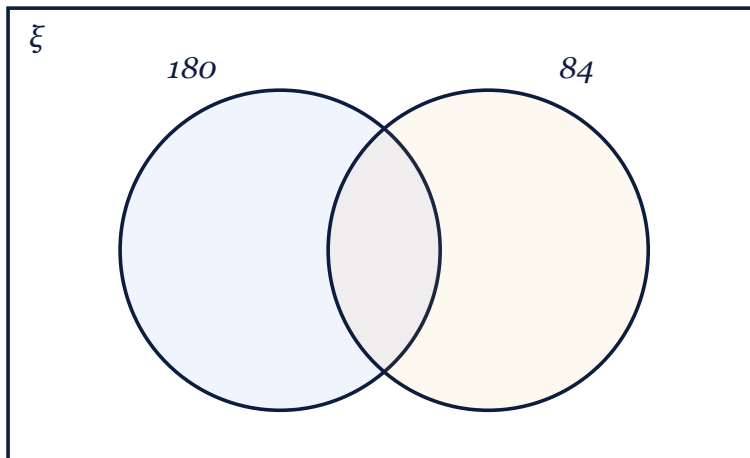
(4 marks)

Answer _____

11

 $180 = 2 \times 2 \times 3 \times 3 \times 5$ and $84 = 2 \times 2 \times 3 \times 7$

- Complete the Venn diagram to show the prime factors of 180 and 84.
- Use your Venn diagram to find the highest common factor (HCF) of 180 and 84.
- Use your Venn diagram to find the lowest common multiple (LCM) of 180 and 84.



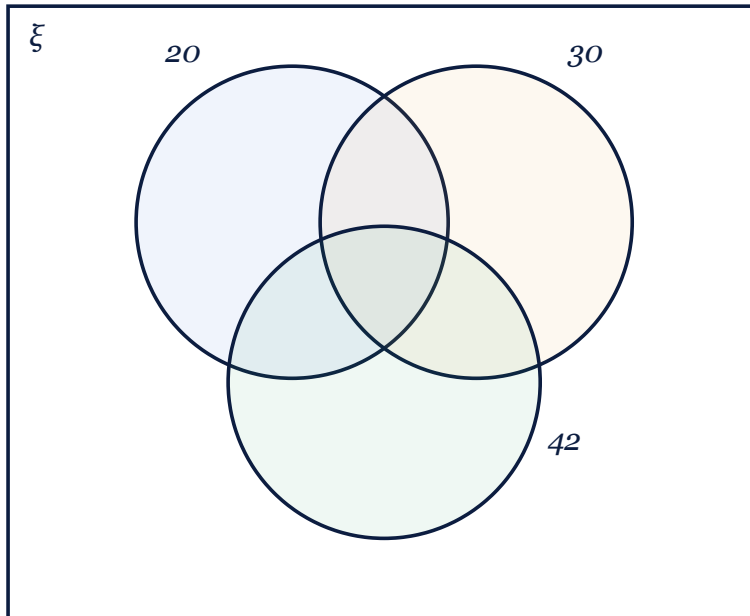
(4 marks)

Answer

12

$$20 = 2 \times 2 \times 5 \quad 30 = 2 \times 3 \times 5 \quad 42 = 2 \times 3 \times 7$$

- Complete the Venn diagram to show the prime factors of 20, 30 and 42.
- Write down the highest common factor of 20, 30 and 42.
- Three lights on a stage flash every 20 seconds, every 30 seconds and every 42 seconds. They all flash together at the start of a show. How many minutes later do all three next flash together?



(4 marks)

Answer

End of questions | Total 36 marks