

**L.C.M**

**PAPER 1**

39. Jacqueline and Sophia stand facing one another. At exactly the same moment both girls start to turn steadily on the spot.

It takes Jaqueline 3 seconds to make one full turn, whilst Sophia takes 4 seconds to complete one full turn.

How many times will Jaqueline have turned when the girls are next facing each other?

Answer.....turns

18. At Frantic Junction, trains arrive at regular intervals on three different lines. On the line from Aytown, trains arrive every 15 minutes. On the line from Beeville, they arrive every 12 minutes and from Ceeford they arrive every 8 minutes. At 10.00am a train from each town arrives at Frantic Junction. What is the next time that three trains will arrive together.

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| 18 |  |
|----|--|

16. A red light flashes four times a minute and a green light flashes six times a minute. If both lights start flashing at the same instant, how many times do they flash at the same instant in one hour including the first and the last time?

|    |  |
|----|--|
| 16 |  |
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10. What is the largest number less than 100 which is a multiple of 2, and of 3, and also of 5?

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| 10 |  |
|----|--|

16. Three bus services stop at my bus stop. Service A departs every 3 minutes, service B every 5 minutes and service C every 8 minutes.

If all three services leave my stop at 10.00 a.m., at what time will they next leave my stop together? (Assume that all three services always run on time).

Answer: \_\_\_\_\_ [3]

18. What is the smallest number that 2, 3, 6, 10 will all go into exactly?

Answer: \_\_\_\_\_

29. My watch (which is a 12 hour watch) gains 3 minutes every 2 hours.

a) I set my watch to the correct time at noon on 1<sup>st</sup> January. If I don't reset it, when will it next show the correct time?

Answer:.....

Mrs Varma's watch (also a 12 hour watch) loses 5 minutes every 2 hours. She also sets her watch to the correct time at noon on 1<sup>st</sup> January.

b) When will our two watches next show the same time?

Answer:.....

c) When will our watches next show the same, **correct** time?

Answer:.....

6. Which number between 40 and 50 is a multiple of both 4 and 6?

Answer: .....

13. Which number between 60 and 80 is a multiple of both 3 and 8?

Answer: .....

11. Write down the number between 41 and 51 which is divisible by both 3 and 4.

\_\_\_\_\_

6. Which number between 50 and 75 is a multiple of both 3 and 7?

Answer: .....

22. Georgia and Atlanta each think of a number.



(a) Georgia always tells the truth. She says

- my number is between 10 and 100
- my number has a larger tens digit than units digit
- my number is odd
- my number is a multiple of 29

What is Georgia's number?

Answer: .....

(b) Atlanta never tells the truth. She says

- my number is greater than 100
- my number is not a multiple of 10
- my number does not divide exactly by 3
- my number has a remainder when it is divided by 4

What is Atlanta's number?

Answer: .....

6. Which number between 60 and 70 is divisible by both 7 and 9?

Answer: .....

42. Find the smallest number which leaves a remainder of 1 when divided by 5 or 6 or 7.

Answer: .....

7. What number between 30 and 40 is divisible by both 3 and 4?

Answer: .....

9. Which number between 140 and 170 can be divided exactly by both 8 and 9?

Answer: .....

8. (a) Write down all the factors of 36.

*Answer:* ..... [2 marks]

- (b) What is the highest common factor of 36 and 18?

*Answer:* ..... [1 mark]

- (c) What is the lowest common multiple of 12 and 15?

*Answer:* ..... [2 marks]

- (d) Write down all the prime numbers between 50 and 60.

*Answer:* ..... [2 marks]

22. Four bells ring at intervals of 2, 8, 7 and 11 seconds.

If they are all rung at the same time, how many seconds will pass before they all ring at the same time again?

You should show some justification for your answer.



..... seconds

(2)

18. When a rope is cut equally into 8 pieces it is discovered that each piece is a whole number of centimetres long. The same thing happens if this rope is cut into 6 pieces. What is the shortest length that this rope could be?
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### Question 3

Florence eats spaghetti every other day. She eats apple pie every three days. Today is Tuesday. Yesterday, which was Monday, she ate both spaghetti and apple pie.

How many times during the next 60 days does she eat both spaghetti and apple pie?

Florence will eat both spaghetti and apple pie

times.