

## QUESTIONS AND CONCLUSIONS

### QUESTIONS 3-4

**Q1:** What is the largest even natural number less than 500 whose digits are all different from each other? (1 point)

- A) 492      B) 498      C) 486      D) 482

#### CONCLUSIONS

**Q1:** We are looking for the largest even number less than 500 with all unique digits.

Start with the largest possible even number under 500, which is 498.

- Digits: 4, 9, and 8 (all different)

The largest even natural number less than 500 whose digits are all different from each other is B) 498.

*SOLUTION IS B*

**Q2:** In the four-digit number  $3\Delta\Delta5$ , the sum of all digits is 20.

What is the sum of the digits  $\Delta$ ? (2 points)

- A) 6      B) 8      C) 10      D) 12

#### CONCLUSIONS

**Q2:** The known digits are 3 and 5.

The sum of these known digits is  $3 + 5 = 8$ .

The equation for the total sum is:

$$3 + \Delta + \Delta + 5 = 20$$

Simplify to:  $\Delta + \Delta = 12$

The sum of the digits  $\Delta$  is D) 12.

*SOLUTION IS D*

**Q3:**



A total of 845 people attended the concert in one day.

If 342 people attended in the morning and 276 people attended in the afternoon, how many people attended the concert in the evening?  
(3 points)

- A) 207      B) 217      C) 227      D) 237

### CONCLUSIONS

**Q3:** The total number of attendees was 845. The number of attendees in the morning was 342, and in the afternoon, it was 276. Calculate the total number of attendees in the morning and afternoon:

$$342 + 276 = 618$$

Subtract this sum from the total number of attendees to find the number of attendees in the evening:

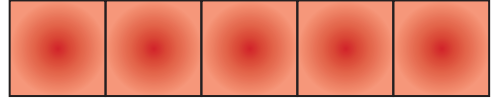
$$845 - 618 = 227$$

The number of people who attended the concert in the evening is

C) 227.

*SOLUTION IS C*

**Q4:**



The shape above consists of 5 equal squares.

If the perimeter of one square is 20 cm, what is the perimeter of the shape below in cm?

(4 points)

- A) 60 cm                      B) 84 cm  
C) 72 cm                      D) 100 cm

### CONCLUSIONS

**Q4:** The perimeter of one square is 20 cm. The side length of one square can be found by dividing the perimeter by 4:

$$\text{Side length} = \frac{20 \text{ cm}}{4} = 5 \text{ cm}$$

The shape consists of 5 equal squares arranged in a row. The total length of the shape will be the sum of the sides of the squares along the top or bottom row.

In this shape, we have 12 side lengths in total.

$$12 \times 5 \text{ cm} = 60 \text{ cm}$$

So, the answer is 60 cm

*SOLUTION IS A*

**Q5:**



Alex went to bed at 21:30 in the evening and woke up at 07:15 in the morning.

**How many hours did Alex sleep? (5 points)**

- A) 9 hours 15 minutes
- B) 9 hours 45 minutes
- C) 10 hours 15 minutes
- D) 10 hours 45 minutes

### CONCLUSIONS

**Q5:** First, calculate the time from 21:30 to midnight (00:00):

From 21:30 to 24:00 is 2 hours and 30 minutes.

Next, calculate the time from midnight to 07:15:

This is 7 hours and 15 minutes.

Add these two time periods together:

2 hours 30 minutes + 7 hours 15 minutes = 9 hours 45 minutes

The total time Alex slept is 9 hours 45 minutes.

*SOLUTION IS B*

**Q6:**



Emma wants to plant flowers around her rectangular garden. The long side of the garden is 60 meters, and the short side is 40 meters.

**If a flower is planted at each corner and flowers are placed at equal intervals of 4 meters, how many flowers can be planted in total? (6 points)**

- A) 50
- B) 70
- C) 100
- D) 110

### CONCLUSIONS

**Q6:** A rectangle has two long sides and two short sides.

The long sides are 60 meters each,

so:  $60 + 60 = 120$  meters

The short sides are 40 meters each,

so:  $40 + 40 = 80$  meters

Add these together to get the total distance around the garden:  $120 + 80 = 200$  meters

Calculate how many flowers can be planted:

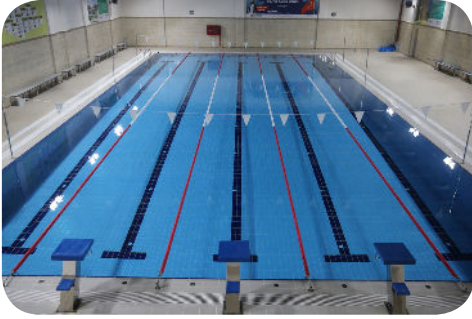
Emma plants a flower every 4 meters.

To find out how many flowers she can plant, divide the total distance by

$$4: \frac{200 \text{ meters}}{4 \text{ meters per flower}} = 50 \text{ flowers}$$

*SOLUTION IS A*

**Q7:**



Chris, Taylor, Morgan, and Jamie participated in a 240-meter swimming race. The distances they covered in the same amount of time are as follows:

- Chris completed two-twelfths of the total distance.
- Taylor completed one-third of the total distance.
- Morgan completed one-fifth of the total distance.
- Jamie completed one-sixth of the total distance.

**Who among them covered the same distance in the same amount of time? (7 points)**

- A) Chris – Taylor
- B) Morgan – Jamie
- C) Chris – Jamie
- D) Taylor – Morgan

## CONCLUSIONS

**Q7: What does “two-twelfths” mean?**

- It means if you divide the whole race into 12 equal parts, Chris swam 2 of those parts.
- To find out how many meters that is, divide 240 meters by 12 (which is 20 meters for each part), then multiply by 2 :  $20 \text{ meters} \times 2 = 40 \text{ meters}$

**What does “one-third” mean?**

- It means if you divide the race into 3 equal parts, Taylor swam 1 of those parts.
- Divide 240 meters by 3 :  $240 \div 3 = 80 \text{ meters}$

**What does “one-fifth” mean?**

- It means if you divide the race into 5 equal parts, Morgan swam 1 of those parts.
- Divide 240 meters by 5 :  $240 \div 5 = 48 \text{ meters}$

**What does “one-sixth” mean?**

- It means if you divide the race into 6 equal parts, Jamie swam 1 of those parts.
- Divide 240 meters by 6 :  $240 \div 6 = 40 \text{ meters}$
- Chris swam 40 meters.
- Taylor swam 80 meters.
- Morgan swam 48 meters.
- Jamie swam 40 meters.

Chris and Jamie swam the same distance. So, the correct answer is C.

*SOLUTION IS C*