

11 10th

12 2

13 Patrick

14 9

15 14

Section 2 : Sec B Integers - 10 Questions

16 325

17 45

18 72

19 28

20 9

21 53

22 26

23 89

24 330

25 9

TEST

AMO Grade 2 Mock Test Paper 4

SOLUTIONS

SECTIONS

1. Sec A MCQs - 15 Questions
2. Sec B Integers - 10 Questions

Section 1 : Sec A MCQs - 15 Questions

1

Regrouping strategy

$$(2 + 98) + (8 + 92) + (12 + 88) + \dots + (48 + 52) \\ = 100 \times 10 = 1000$$

2

Let the original number be 1 unit.

As 1 unit is 25, the original number is 25.

1 unit		
1 unit	1 unit	1 unit: 25

3

The number of days from 16th August to 30th October is $16 + 30 + 30 = 76$.

$76 \div 7 = 10R6$ or 10 whole weeks and 6 days in the 76-day period

Thus, there are $10 + 1 = 11$ Sundays.

4

Factors of 72 are 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72.

The only two factors to get a sum of 40 are 4 and 36.

Their difference is $36 - 4 = 32$.

5

Regrouping Strategy

$$(76 + 12 + 2) \times 8 = 90 \times 8 = 720$$

6

Approximation strategy,

$$60 \times 25 = 1500$$

$$50 \times 20 = 1000$$

The product of 58×24 will be between 1000 and 1500.

7

Louis completed 2200 metres in 5 and a half rounds.

So, he would have covered 4400 metres in 11 rounds.

Thus, one round is $4400 \div 11 = 400$ metres.

8

$$5A8 + B2 = 600$$

$$\text{Thus, } A8 + B2 = 100$$

The digits (A,B) can be (1,8), (2,7), (3,6), or (4,5).

The largest possible difference between A and B is $8 - 1 = 7$.

9

The smallest number divisible by 2, 5, and 7 is 70.

Working backwards: $70 + 10 = 80$

So, the smallest such number is 80.

10

1-part rectangles - 5

2-part rectangles - 1

3-part rectangles - 1

4-part rectangles - 1

5-part rectangles - 1

The total number of rectangles is $5 + 1 + 1 + 1 + 1 = 9$.

11

Child 1 gets 1 card, child 2 gets 2 cards with the last card numbered 3 ($1 + 2 = 3$), child 3 gets 3 cards with the last card numbered 6 ($1 + 2 + 3$), and so on.

Following the same pattern:

Child 4 has 4 cards, $1 + 2 + 3 + 4 = 10$ with 10 as the last number.

Child 9 has 9 cards, $1 + 2 + 3 + \dots + 8 + 9 = 45$ with 45 as the last number.

Child 10 has cards, $1 + 2 + 3 + \dots + 8 + 9 + 10 = 55$ with 55 as the last number.

Thus, the 10th child has cards with numbers 46 to 55.

12

Among all the possible outcomes:

HHH, HHT, HTH, HTT, TTH, THT, THH, TTT

The number of ways with head in the first toss and tail in the last toss is 2.

13

Bret has fewer marbles than Ruby but more than Teresa – Bret has more marbles than Teresa while Ruby has more marbles than Bret. Thus, Bret and Ruby do not have the least number of marbles.

Patrick has fewer marbles than Suzy and fewer marbles than Bret – Suzy has more marbles than Patrick so, Suzy does not have the least number of marbles.

Teresa has fewer marbles than Suzy but she does not have the least number of marbles – Teresa does not have the least number of marbles.

By elimination, the last person left, Patrick has the least number of marbles.

14

Since, $A + 7 + 9 = 19$, $A = 19 - 9 - 7 = 3$.

The group of numbers 3, 7 and 9 which add up to 19 will be repeated so that the sum of any three neighbouring numbers is 19. Thus, $B = A = 3$, $C = 7$ and $D = 9$.

Let the number of chocolates Yasmine has be 1 *unit*. Then, Dorothy and Todd have 2 *units* each.

$$2 \text{ units} + 2 \text{ units} + 1 \text{ unit} = 5 \text{ units} = 35 \text{ or } 1 \text{ unit} = 7$$

Thus, Dorothy has $7 \times 2 = 14$ chocolates.

Section 2 : Sec B Integers - 10 Questions

16

There are 60 minutes in one hour.

$$60 - 35 = 25 \text{ minutes}$$

Thus, Carry slept at 3.25 pm.

17

Paul takes 4 minutes and 30 seconds to jog 1 km.

So, Paul takes 9 minutes to jog 2 km.

$$10 \div 2 = 5$$

Thus, Paul will take $9 \times 5 = 45$ minutes to jog 10 km.

18

Visual representation shows that one-sixth of the movie length is 12 minutes:

$\frac{1}{3} = \frac{2}{6}$	12 minutes		$\frac{1}{3} = \frac{2}{6}$
$\frac{1}{2} = \frac{3}{6}$			

Since 1 unit is 12 minutes while the movie length is 6 units, the movie is $12 \times 6 = 72$ minutes long.

19

Let the first number be 1 *unit*. Then, the second number will be 1 *unit* + 2 and the third number will be 1 *unit* + 4.

$$1 \text{ unit} + (1 \text{ unit} + 2) + (1 \text{ unit} + 4) = 78$$

$$3 \text{ units} = 72$$

$$1 \text{ unit} = 24$$

$$\text{Largest number} = 1 \text{ unit} + 4 = 24 + 4 = 28$$

20

Since ones digit is one-third of the tens digit, the only possibilities are as follows:

Ones digit	Tens digit	Hundred + thousand digit	Sum of all digits
1	3	3	$1 + 3 + 3 = 7$
2	6	6	$2 + 6 + 6 = 14$
3	9	9	$3 + 9 + 9 = 21$

Thus, the tens digit must be 9 to fulfil all the conditions.

21

The total number of cookies between Olivia and Lara remains the same even after cookies are exchanged.

Let the number of cookies Olivia has in the end be 1 unit, Lara's be 2 units:

$$1 \text{ unit} + 2 \text{ units} = 3 \text{ units} = 105$$

$$1 \text{ unit} = 105 \div 3 = 35$$

Olivia has 35 cookies after giving 18 cookies to Lara.

Thus, Olivia had $35 + 18 = 53$ cookies at first.

22

$$\text{Sum of all numbers from 11 to 16} = 27 \times 3 = 81$$

Since the sum of the numbers of Player 1's cards is 42, the sum of the numbers of Player 2's cards must be $81 - 42 = 39$.

Let the first number of Player 2 be 1 unit. Then

$$1 \text{ unit} + (1 \text{ unit} + 1) + (1 \text{ unit} + 2) = 39$$

$$3 \text{ units} + 3 = 39 \text{ or } 3 \text{ units} = 36 \text{ or } 1 \text{ unit} = 12$$

Thus, Player 2 has the cards numbered 12, 13, and 14 and the sum is $12 + 14 = 26$.

23

$$\text{Difference between 4 terms (1}^{\text{st}} \text{ and 5}^{\text{th}}) = 257 - 209 = 48$$

$$48 \div 4 = 12$$

Therefore, each term is subtracted by 12 to get the next term.

The difference between the 5th term and the 15th term should be $12 \times 10 = 120$.

$$15^{\text{th}} \text{ term} = 209 - 120 = 89$$

24

The sum of the first 10 multiples of 6 is

$$6 \times 1 + 6 \times 2 + 6 \times 3 + 6 \times 4 + \cdots + 6 \times 10$$

$$= 6 \times (1 + 2 + \cdots + 10)$$

$$= 6 \times 55$$

$$= 330$$

25

Notice the pattern:

$$4 \times 5 - 2 = 18$$

$$7 \times 3 - 4 = 17$$

$$P \times 5 - 7 = 38$$

Working backwards, $P = (38 + 7) \div 5 = 9$