

12 4.5 km

13 10

14 Tuesday

15 8

Section 2 : Section B Integers - 10 Questions

16 296

17 25

18 25

19 35

20 26

21 13

22 6

23 750

24 88

25 36

TEST

AMO Grade4 Mock Test Paper 3

SOLUTIONS

SECTIONS

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

Section 1 : Section A MCQs - 15 Questions

1

Any number which is divisible by 5 and 11 is divisible by 55. The greatest 3-digit number is 999

$$999 \div 55 = 18 \text{ R } 10$$

Thus, $55 \times 18 = 990$ is the greatest 3-digit number divisible by 5 and 11.

2

Regrouping and solving

$$450 \times 3 + 450 \times 17 - 450 \times 19 = 450 \times (3 + 17 - 19) = 450$$

3

In a leap year, there are 52 weeks and 2 extra days. Since there are 53 Saturdays this year, the 2 extra days can only be Fridays and Saturdays or Saturdays and Sundays. All the other days of the week including Tuesday have only 52 days.

4

$$\frac{1}{2} \text{ of } \frac{2}{3} \text{ of } \frac{6}{9} \text{ of } 549 = \frac{1}{2} \times \frac{2}{3} \times \frac{6}{9} \times 549 = 122$$

5

$$\text{Side of a square} = \text{perimeter} \div 4 = 124 \div 4 = 31 \text{ cm}$$

$$\text{Area} = \text{side} \times \text{side} = 31 \times 31 = 961 \text{ cm}^2$$

6

$500 - 14 = 486$ chairs were distributed in 18 rooms.

$486 \div 18 = 27$ chairs were placed in each room.

7

A number is divisible by 3 when the sum of digits is divisible by 3.

$9 + 5 = 14$ while $9 + 9 = 18$. However, $14 + 18 = 32$ is not divisible by 3. Thus, 99 is wrong.

$9 + 8 = 17$. $14 + 17 = 31$ is not divisible by 3. Thus, 98 is wrong.

$9 + 7 = 16$. $14 + 16 = 30$ is divisible by 3. Thus, 97 is the greatest two-digit number to be added to 95 so that it is divisible by 3.

8

Adding all three equations:

$$2 \times A + 2 \times B + 2 \times C = 28 + 40 + 36 = 104$$

$$A + B + C = 104 \div 2 = 52$$

$$5 \times A + 5 \times B + 5 \times C = 52 \times 5 = 260$$

9

The given series can be divided into 2 different series beginning with 550 and 490 and then subtracting 30 as we move forward.

550, 520, 490, ...

490, 460, 430, ...

So, the 10th term of the series will be the 5th term of the second series beginning with 490.

490, 460, 430, 400, **370**

10

Given the conditions given, Kevin had the least number of 30 marbles, Sam had 35 marbles, Pam had 32 marbles and Larry had 38 marbles.

$38 + 32 = 70$ marbles. So, Larry and Pam have 70 marbles in total.

11

$$\text{Brad}=10$$

$$\text{Suzy}=10-4=6$$

$$\text{Brad}+\text{Suzy}=10+6=16$$

$$\text{Charlie}=16\div 2=8$$

$$\text{Brad}+\text{Suzy}+\text{Charlie}=10+6+8=24$$

12

-

The distance travelled at the end of 4 hours = $3+2.5+2.5+2.5=10.5$ km

Thus, the distance from aunt's house after 4 hours = $15 - 10.5 = 4.5$ km

13

1-part triangles=4

2-part triangles =4

4-part triangles =2

So, the total number of triangles in the given figure =10

14

Since they take a day off on every 4th and 5th day, they will have a day off together on every 20th day.

$20\div 7=2$ R 6 or 2 weeks and 6 days

So if the 20th day later is Monday today, 2 weeks before Monday was still Monday and 6 days before Monday was Tuesday.

Monday	Sunday	Saturday	Friday	Thursday	Wednesday	Tuesday
0	-1	-2	-3	-4	-5	-6

15

We notice that the largest square is made of 4 small squares and the smallest rectangle is half the size of the small square. Thus, the largest square is $4\times 2=8$ times bigger than the smallest rectangle.

Section 2 : Section B Integers - 10 Questions

16

Volume of big cube = $8 \times 8 \times 8 = 512$ cubic units

Volume of small cube = $6 \times 6 \times 6 = 216$ cubic units

Volume of liquid = $512 - 216 = 296$ cubic units

17

When $A = 21$, $A - 15 = 21 - 15 = 6$.

The 10th odd number after 6 is 25.

7, 9, 11, 13, 15, 17, 19, 21, 23, 25

18

If 10 mangoes were removed, weight = 3 kg = 3000 grams

If 8 mangoes were removed, weight = 3400 grams

Therefore, the weight of 2 mangoes = 400 grams or 1 Mango weighs 200 grams.

Number of mangoes in the cart when 10 mangoes were removed = $3000 \div 200 = 15$

So, total number of mangoes in the cart = $15 + 10 = 25$

19

$$1260 = \underline{2 \times 2} \times \underline{3 \times 3} \times 5 \times 7$$

The least possible value of k will be a product of 5 and 7 as each of them does not form a pair of square numbers.

Thus, $k = 35$

20

A flag needs to be placed at the start and the end and everywhere in between at a distance of 4 metres. $100 \div 4 = 25$ intervals

Therefore, number of flags required = $25 + 1 = 26$

21

Consider 4 red, 3 orange and 5 yellow as one set. Thus, one set contains 12 flowers.

$$200 \div 12 = 16 \text{ R } 8$$

Thus in 200 flower garlands, we have 16 full sets and 4 red, 3 orange and 1 yellow flower.

$$\text{Total number of red flowers} = 16 \times 4 + 4 = 68$$

$$\text{Total number of yellow flowers} = 16 \times 5 + 1 = 81$$

$$\text{Difference between the numbers of yellow and red flowers} = 81 - 68 = 13$$

22

If he got all the correct answers, the score would be $= 10 \times 5 = 50$

But the actual marks scored = 22; the difference in marks $= 50 - 22 = 28$

Also, actual loss, if the problem is not answered correctly, is $5 + 2 = 7$

$$28 \div 7 = 4 \text{ problems were answered wrongly.}$$

Thus, he answered $10 - 4 = 6$ problems correctly.

23

Assume all 150 vehicles are motorbikes, there will be only $150 \times 2 = 300$ tires.

There is a difference of $360 - 300 = 60$ tires.

To top up the 60 missing tires, some motorbikes must be changed to cars.

By changing 1 motorbike to 1 car, $4 - 2 = 2$ tires will be added.

There are $60 \div 2 = 30$ motorbikes that need to be changed to 30 cars.

$$\text{Earnings from 30 cars} = \$25 \times 30 = \$750$$

24

We notice that length of the large rectangle $= 3 \times$ width of the small rectangle $= 3 \times 8 = 24$ cm

The length of the small rectangle is $24 \div 2 = 12$ cm

Width of the large rectangle $=$ length of the small rectangle $+$ width of the small rectangle $= 12 + 8 = 20$ cm

$$\text{Perimeter of the large rectangle} = 2 \times (24 + 20) = 2 \times 44 = 88 \text{ cm}$$

25

Consider the worst-case scenario when the last key is always the correct key. So, for the first door, you must try 8 keys. We know then that the 9th key will be the correct one. We do not have to try the 9th key as it matches for sure.

Similarly, for the next door, we just have to try 7 keys to match the right key to door number 8. Going in the same way, we get a pattern.

We must try at least $8+7+6+5+4+3+2+1 = 9 \times 4 = 36$ times to match the keys to their locks.