

Calsoft Sample Paper Questions

1. Grass in lawn grows equally thickened in a uniform rate. It takes 24 days for 70 cows and 60 for 30 cows. How many cows can eat away the same in 96 days?

- A. 18
- B. 20
- C. 21
- D. 19

Explanation:

Let g = grass initially, r = rate at which grass grow/day and c = cow eat grass/day.

$$\Rightarrow g + 24r = 70 * 24c = 1680c \text{ -----(i)}$$

and,

$$\Rightarrow g + 60r = 60 * 30c = 1800c$$

$$\Rightarrow g = 1800c - 60r \text{ -----(ii)}$$

By solving these equations, we have $c = (3/10) r$ -----(iii)

$$\Rightarrow g + 96r = 96nc.$$

$$\Rightarrow 96nc = 1800c - 60r + 96r = 1800c + 36r = 1800c + 120c = 1920c$$

$$\Rightarrow n = 20.$$

2. After striking the floor, a rubber ball rebounds to $4/5$ th of the height from which it has fallen. Find the total distance that it travels before coming to rest if it has been gently dropped from a height of 120 m.

- A. 540m.
- B. 960m.
- C. 1080m.
- D. 1020m

Explanation:

After the drop, it travels down for h meters and rebounds back to $4h/5$ and travels down $4h/5$ and rebounds back $4/5(4h/5)$ etc.

The total distance it travels = $h + 4h/5 + 4h/5 + 4/5(4h/5) + 4/5(4h/5) + 4/5 * 4/5(4h/5) + \dots$

$$S = h + 2 * 4h/5 + 2(4/5) (4h/5) + \dots$$

$$= h + 2\{4h/5 + 4/5(4h/5) + \dots\}$$

$$= h + 2(\text{Sum of infinite GP with initial term } 4h/5 \text{ and common ratio } 4/5)$$

Formula: Sum of Infinite GP with initial term 'a' and common ratio 'r' is $a/(1-r)$

$$S = h + 2\{(4h/5) / (1-4/5)\}$$

$$= h + 8h = 9h = 9 * 120 = 1080.$$

3. A father's age was 5 times his son's age 5 years ago and will be 3 times son's age after 2 years, the ratio of their present ages is equal to:

option

- A. 3:7
- B. 5:11
- C. 10:3
- D. 10:7

Explanation:

Let the ages of father and son be x and y .

Then,

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$$\Rightarrow x-5 = 5(9y-5).$$

$$\Rightarrow x+2 = 3(y+2).$$

On solving we get, $x/y=10/3$.

4. The average of 7 numbers is 50. The average of first three of them is 40, while the average of the last three is 60. What must be the remaining number?

- A. 60
- B. 50
- C. 45
- D. 55

Explanation:

Consider a,b,c,d,e,f,g are the seven numbers.

Given, $(a+b+c+d+e+f+g)/7 = 50$ -----(i)

$(a+b+c)/3=40$ which means $a+b+c=120$, and $(e+f+g)/3=60$ which means $e+f+g=180$.

Using both the values in eq(i), we get $120+d+180 = (50*7)$

$\Rightarrow d + 300 = 350$ which implies $d=50$.

5. A 10-litre mixture of milk and water contains 30 percent water. Two liters of this mixture is taken away.

How many liters of water should now be added so that the amount of milk in the mixture is double that of water?

- A. 1.4
- B. 0.8
- C. 0.4
- D. 0.7

Explanation:

In case of a mixture, for any amount of the sample will contain the ingredients in the same proportion. So even if 2 L is taken away, the remaining 8 L will have 30% water and 70% milk.

Amount of water = $30*8/100 = 2.4L$

Amount of milk = $8-2.4 = 5.6L$

For the mixture to have the amount of water double the amount of milk,

by changing only the amount of water, it should contain $5.6/2 = 2.8L$ of water.

Therefore, the amount of water to be added = $2.8 - 2.4 = 0.4L$.

6. The minimum number of digits required to form every number which is greater than 900 and less than 9,000 is: -

- A. 39
- B. 72
- C. 49
- D. 81

Explanation:

We have to find the minimum number of numbers required to form every number from 900 to 9,000.

Unit place of a number from 900 to 9,000 can be formed using 0 to 9 digits. i.e., 10 digits.

10's place of a number from 900 to 9,000 can be formed using 0 to 9 digits. i.e., 10 digits.

100's place of a number from 900 to 9,000 can be formed using 0 to 9 digits. i.e., 10 digits.

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1000's place of a number from 900 to 9,000 can be formed using 1 to 9 digits. i.e., 9 digits.
Therefore, total number of numbers required is $10 + 10 + 10 + 9 = 39$.

7. When not moving on the sidewalk, Maya can walk the length of the sidewalk in 7 minutes. If she stands on the sidewalk as it moves, she can travel the length in 4 minutes. If Maya walks on the sidewalk as it moves, how many minutes will it take her to travel the same distance? Assume she always walks at the same speed, and express your answer as a decimal to the nearest tenth.
- A. 3.6
 - B. 2.5
 - C. 3.8
 - D. 2.8

Explanation:

Assume distance of sidewalk "x"

speed1 (moving on sidewalk)

speed2 (moving off sidewalk)

since both the movements are in same direction, we can do speed1 + speed 2

$$\text{speed1} = x/4$$

$$\text{speed2} = x/7$$

$$\text{speed1} + \text{speed2} = 11x/28 = 0.39286x$$

$$\text{now new time while moving on sidewalk} = x/0.39286x = 2.54544$$

hence, the answer is 2.5.

8. Mr. Verma has 4 different paintings that he wishes to divide among his 3 children. In how many ways can he do this if each child must get at least 1 painting and all paintings are different?
- A. 48
 - B. 18
 - C. 36
 - D. 72

Explanation:

First child could get 1 out of 4 paintings: 4

Second can get 1 out of remaining 3: 3

Third will get 1 out of remaining 2: 2

Now the last painting could be given to any of the three child in 3 diff ways:

Thus, total number of ways: $(4 * 3 * 2) * 3$ i.e. 72.

Calsoft Logical Reasoning Test

9. Adhir mishra has three children- Urmila, Raghu and Sumit. Sumit married to Rama, the eldest daughter of Mr. and Mrs. Mohan. Mr. Mohan married their youngest daughter to the eldest son of Mr. and Mrs. Sharma and they had two children Sandeep and Shaifali. Mr. Mohan have two more children, Roshan and Bimla, both elder to Sheila. Sohan and Shivendra are sons of Sumit and Roma. leela is the daughter of Sandeep. How is Mrs. Mohan related to Sumit?

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- A. Aunt
- B. Mother-in-law
- C. Mother
- D. Sister-in-law

Answer: B.

10. Find the next number of the series:

4,18,100, 350,?

- A. 765
- B. 860
- C. 868
- D. 800

Explanation:

Difference of 4,18 100,350 is: - 14,82,250

difference of 14,82,250 is 68,168.

Since it is increasing by 100.therefore, next in series will be 268.

Therefore, next in the second series will be $250+268=518$.

So, next in the first series will be $350+518=868$.

11. q1. What is value of 'a' if 'a' is an integer?

(1) $a^4 = 1$

(2) $a^3 + 1 = 0$.

- A. (1) alone is sufficient
- B. (2) alone is sufficient
- C. (1) and (2) both are required.
- D. Neither of the statement is sufficient

Explanation:

From 2nd equation,

$\Rightarrow a^3+1=0$

$\Rightarrow a^3=-1$.

If a^3 is -1 then a must be $-1(-1)^3=-1$.

And it also satisfies equation 1.

So, $a=-1$.

12. Jumbled Sentences:

S1: All the land was covered by the ocean.

P: The leading god fought the monster, killed it and chopped its body in to two halves.

Q: A terrible monster prevented the gods from separating the land from the water.

R: The god made the sky out of the upper part of the body and ornamented it with stars.

S: The god created the earth from the lower part, grew plants on it and populated it with animals.

S6: The god molded the first people out of clay according to his own image and mind.

The Proper sequence should be:

- A. PQRS
- B. PQSR
- C. QPSR

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D. QPRS

Answer: D.

13. If PROMPT is coded as QSPLOS, then PLAYER should be coded as ?

A. QMBZDQ

B. QMBXDS

C. QMBXDQ

D. none of these

Explanation:

P --+1--> Q

R --+1--> S

O --+1--> P

M --(-1) --> L

P --(-1) --> O

T --(-1) --> S

So,

P -- +1 --> Q

L -- +1 --> M

A -- +1 --> B

Y --(-1) --> X

E --(-1) --> D

R --(-1) --> Q

14. In a class of boys and girls Vikas's rank is 9th and Tanvi's Rank is 17th. Vikas's Rank among the boys in that class is 4th from the top and 18th from the bottom and Tanvi's rank among the girls is 8th from top and 21st from bottom. In the order of rank, how many girls are there between Tanci and Vikas?

A. 1

B. 2

C. 5

D. 3

Explanation:

Vikas's rank in the class is 9 so there are 8 people before him. his rank among boys is 4, so 3 boys are before him. so there are $8-3=5$ girls before him.

Tanvi's rank among the girls is 8 so there are 7 girls before her.

so number of girls between Vikas and Tanvi is $7-5=2$.

15. Find the odd man out: -

3,5,11,14,17,21

A. 21

B. 14

C. 17

D. 11

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Explanation:

because except 14 all are odd numbers.

Calsoft Logical Reasoning Test

16. If the time quantum is too large, Round Robin scheduling degenerates to

- A. Shortest Job First Scheduling
- B. Multilevel Queue Scheduling
- C. FCFS
- D. None of the above

Answer: C.

```
17. void main(){
char *p=""s"Hello";
printf("%s",p);
}
```

What is the output of the above program?

- A. sHello
- B. s
- C. Hello
- D. error

Answer: D.

18. Banker's algorithm for resource allocation deals with

- A. Deadlock prevention
- B. Deadlock avoidance
- C. Deadlock recovery
- D. None of these

Answer: B.

19. Which of the statements is correct about the following program?

```
#include
int main() {
int i = 10;
int *j = &i;
return 0;
}
```

- A. j and i are pointers to an 'int'.
- B. i is a pointer to an int and stores address of j.
- C. j is a pointer to an int and stores address of i.
- D. j is a pointer to a pointer to an int and stores address of i.

Answer: C.

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20. In which of the following page replacement policies, Balady's anomaly occurs?
- A. FIFO
 - B. LRU
 - C. LFU
 - D. NRU

Answer: A.

21. Which of the following layers are not in TCP / IP?
- A. Application Layer
 - B. Network Layer
 - C. Bridging Layer
 - D. Data Link Layer

Answer: C.

22. A data structure where elements can be added or removed at either end but not in the middle
- A. Linked lists
 - B. Stacks
 - C. Queues
 - D. Deque

Answer: D.

23. While converting binary tree into extended binary tree, all the original nodes in binary tree are _____
- A. Internal nodes on extended tree
 - B. External nodes on extended tree
 - C. Vanished on extended tree
 - D. Intermediate nodes on extended tree

Answer: A.

Calsoft Verbal Ability Test

24. Fill in the blank:
We as human beings get easily _____ by materialistic pleasures of modern age.
- A. distracted
 - B. mingled
 - C. away
 - D. attracted

Answer: A.

25. Fill in the blank:

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A contract must be honored. You cannot _____ on it.

- A. Back out
- B. Give Up
- C. Renege
- D. Renounce

Answer: C.

26. Synonym:

MITIGATE

- A. Diminish
- B. Divulge
- C. Dedicate
- D. Denote

Answer: A.

27. Synonym:

CITE

- A. galvanize
- B. visualize
- C. locate
- D. quote
- E. signal

Answer: D.

28. Antonym:

RELINQUISH

- A. Abdicate
- B. Renounce
- C. Possess
- D. Deny

Answer: C.

29. Antonym:

AFFABLE

- A. rude
- B. ruddy
- C. needy
- D. useless
- E. conscious

Answer: A.

30. Sentence correction:

The man to whom I sold my house was a cheat.

- A. to whom I sell
- B. to who I sell

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- C. who was sold to
- D. to whom I sold
- E. No correction required

Answer: D.