

Sample CAA Mathematics Placement Test

Amity Business School, Dubai

Time Duration- 2hours

Total Marks- 50 Marks

Important Instructions

- All questions are compulsory.
 - Each question carries 2 marks.
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Questions:

1. If $-5(x - 3) + 2(x + 6) = 12$, what is the value of x ?
2. In a right triangle, one angle measure x^0 , where $\sin x^0 = \frac{3}{5}$ what is $\cos(\frac{\pi}{2} - x^0)$?
3. If x is 8 and $f(x) = x - 4$, what is the value of $3f(x)$?
4. What is the sum of the following polynomial?
 $5x^3 - x + 4$ and $6x^3 + x^2 - 3$
5. If $\frac{x^2}{6} = \frac{x}{2}$, what is the value of x ?
6. Expand the below expression
 $(2 + x)(3 - y)$
7. What are the values of x and y in the system of equation below
 $3x + 4y = 1$
 $2x - 2y = 10$
8. Julia's family took a road trip in which they drove 8 hrs a day and averaged a driving speed of 50 miles per hr. If they spent a total of 6 days on a trip, how far in total did they drive.
9. If the function $f(x) = \frac{x^2+3}{2x}$ when $x \neq 0$, what is the value of $f(6)$
10. If $ax + by = 5$ is a line in the xy -coordinate plane in which a and b are constants, what would be the slope of the line?
11. If there are 200 students in a graduating class, and 40 of them graduated with honors, what percent of students in the class graduate with honors?

12. Suppose the price of a product is typically p dollars. If a 30% discount is applied to the price, what is the discounted price in terms of p .

13. If $x + y = 7$ and $x - y = 3$, what is the value of $3x^2 - 3y^2$?

14. Diego deposited \$ 10000 for 4 year at a rate of 6% p.a. Find the interest and amount Diego got.

15. Two pens and one eraser cost Rs. 35 and 3 pencil and four erasers cost Rs. 65. Find the cost of pencil and eraser separately.

16. Richard deposits \$ 5400 and got back an amount of \$ 6000 after a year. Find the simple interest he got.

17.

	Dog	Cat	Total
Male	60	40	100
Female	50	38	88
Total	110	78	188

If there were a randomly selected pet owner from the table above , what is the probability that it would be a male cat owner?

18. Find the median of this set of numbers?

$\{2,5,7,9,12,16\}$

19. The average monthly attendance of a class is given.

Month	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Attendance	42	46	30	50	38	20	36	32

(i) In which month the average attendance was less than 40?

(ii) Find the difference between the maximum and minimum average attendance?

20. If $5(x+4)-3(x+4)=3x-2$, what is the value of x ?

21. An airplane travels a distance of 3,000 miles in a time of 10 hours. What is its speed in miles per hour?
22. A silverware drawer has a total of 80 forks and spoons. If there are 5 forks for every 3 spoons , how many forks are there in the drawer?
23. Write the formula describing the sequence 6,14,22,30,...
24. Find the mean of first 10 odd integers
25. Find the next term in the sequence below
-6,-1,4,?

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