

Q1: Value of log 6

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The value of log 6 is equal to:

Options

$\log 1 + \log 2 + \log 3$

$\log(1+2+3)$

$\log(1 \cdot 2 \cdot 3)$

all of the above

Correct Answer

Solution Description

$\log 6 = \log(1 \times 2 \times 3) = \log 1 + \log 2 + \log 3$

Also $\log 6 = \log(1+2+3)$. Hence, option d is correct.

Q2: Value of log

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Find the value of $\log(\text{base } 8)128$.

Options

7

$7/3$

$5/3$

None of these

Correct Answer : 7 / 3

Q3: Predict The Value

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Find the value of $\log(\text{base } y) x * \log(\text{base } z) y * \log(\text{base } x) z$

Options

0

1

$\log x$

xyz

Correct Answer : 1

Q4 : Find the value?

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If $(\log a / (b - c)) = (\log b / (c - a)) = (\log c / (a - b))$, then find the value of $a^a * b^b * c^c$.

Options

0

2

3

1

Correct Answer

Solution Description

$$\log a/b - c = \log b/c - a = \log c/a - b = k$$

$$\text{Then, } \log a = k(b - c)$$

$$\log b = k(c - a)$$

$$\log c = k(a - b)$$

$$\text{Let } A = a^a \cdot b^b \cdot c^c$$

$$\text{Then } \log A = a \log a + b \log b + c \log c$$

$$= ak(b - c) + bk(c - a) + ck(a - b)$$

$$= abk - ack + bck - abk + cak - bck = 0$$

$$\text{Thus } \log A = 0 = \log 1$$

$$\therefore A = 1$$

i.e., $a^a \cdot b^b \cdot c^c = 1$. Hence, option d is correct.

Q5 : Find the sum?

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Find the sum of n terms of the series $\log(\text{base } 3)(p/q) + \log(\text{base } 9)((p/q)^2) + \log(\text{base } 27)((p/q)^3) + \dots$ n terms:

Options

$$(n+1)\log(\text{base } 3)(p/q)$$

$$n\log(\text{base } 3)(p/q)$$

$$n\log(\text{base } 3)((p/q)^2)$$

$$\log(\text{base } 3)(p/q)$$

Correct Answer: option B

Q6 : Find the value of log?

Send Feedback

Find the value of $\log x + \log(x)^4 + \log(x)^9 + \dots \log(x)^{(n \cdot n)}$

Options

$$(n/6) \cdot (n+1) \cdot (2n+1)$$

$$(n/2) \cdot (n+1) \cdot \log x$$

$$(n/2) \cdot (n+1)$$

$$(n/6) \cdot (n+1) \cdot (2n+1) \cdot \log x$$

Correct Answer

Solution Description

$$\log x + (\log x)^4 + (\log x)^9 + \dots + (\log x)^{(n \cdot n)}$$

$$\log[x^{1 \cdot x^4 \cdot x^9 \cdot \dots \cdot n \text{ times}}]$$

$$\log[x^{(1+4+9+\dots+n \cdot n)}]$$

$$\log[x^{(\sum n^2)}] = \log[x^{(n(n+1)(2n+1)/6)}]$$

$$= ((n \cdot (n+1) \cdot 2n+1)/6) \cdot \log x. \text{ Option d is correct.}$$

Q7 : Number Of Members

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In Mindworkzz club all the members like either in Superman or Batman. 320 like in the Batman, 350 like in Superman and 220 like in both. How many members does the club have?

Options

- 410
- 550
- 440
- 450

Correct Answer : 450

Q8 : How many cleared all three sections?

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Refer to the data below and answer the questions that follow.

Last year, there were 3 sections in ASCC, a mock CAT paper. Out of them 33 students cleared the cutoff in Section A, 34 students cleared the cutoff in Section B and 32 cleared the cutoff in Section C. 10 students cleared the cutoff in Section A and Section B, 9 cleared the cutoff in Section B and Section C, 8 cleared the cutoff in Section A and Section C. The number of people who cleared each section alone was equal and was 21 for each section.

How many cleared all the three sections?

Options

- 7
- 6
- 5
- 8

Correct Answer : 6

Q9 : Cleared Only One

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Refer to the data below and answer the questions that follow.

Last year, there were 3 sections in ASCC, a mock CAT paper. Out of them 33 students cleared the cutoff in Section A, 34 students cleared the cutoff in Section B and 32 cleared the cutoff in Section C. 10 students cleared the cutoff in Section A and Section B, 9 cleared the cutoff in Section B and Section C, 8 cleared the cutoff in Section A and Section C. The number of people who cleared each section alone was equal and was 21 for each section.

How many cleared only one of the three sections?

Options

- 21
- 63
- 42

52

Correct Answer : 63

Q10 : Find the ratio?

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Refer to the data below and answer the questions that follow.

Last year, there were 3 sections in ASCC, a mock CAT paper. Out of them 33 students cleared the cutoff in Section A, 34 students cleared the cutoff in Section B and 32 cleared the cutoff in Section C. 10 students cleared the cutoff in Section A and Section B, 9 cleared the cutoff in Section B and Section C, 8 cleared the cutoff in Section A and Section C. The number of people who cleared each section alone was equal and was 21 for each section.

The ratio of the member of students clearing the cutoff in one or more of the sections to the number of students clearing the cutoff in Section A alone is?

Options

78/21

3

73/21

None Of These

Correct Answer : 78 / 21

Q11 : How many surveyed?

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A survey of faculty and graduate students at the Mumbai Film Academy revealed the following information: 51 admire Aamir Khan, 49 admire Shahrukh Khan, 60 admire Salman Khan, 34 admire Aamir Khan and Shahrukh Khan, 32 admire Shahrukh Khan and Salman Khan, 36 admire Aamir Khan and Salman Khan, 24 admire all three of the Khans and 3 admire none of the three Khans.

How many people were surveyed?

Options

82

83

84

85

Correct Answer: 85

Q12 : How many admire?

[Send Feedback](#)

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Khan and Shahrukh Khan, 32 admire Shahrukh Khan and Salman Khan, 36 admire Aamir Khan and Salman Khan, 24 admire all three of the Khans and 3 admire none of the three Khans.

How many admire Shahrukh, but not Salman or Aamir?

Options

- 5
- 7
- 16
- 24

Correct Answer : 7

Q13 : Admire Either Salman Or Aamir

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How many admire either Salman or Aamir but not Shahrukh?

Options

- 33
- 38
- 43
- 48

Correct Answer: 33

Q14: How many admire not Khans?

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How many admire not more than one of the Khans?

Options

- 28
- 31
- 84
- 39

Correct Answer: 31

Q15: How many learners?

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There are 79 Grade 10 learners at school. All of these take some combination of Maths, Geography and History. The number who take Geography is 41; those who take History is 36; and 30 take Maths. The number who take Maths and History is 16; the number who take Geography and History is 6, and there are 8 who take Maths only and 16 who take History only.

How many learners take Maths and Geography but not History?

Options

- 6
- 10
- 16
- 22

[Correct Answer: 6](#)

Q16 : Learners Take Geography Only

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There are 79 Grade 10 learners at school. All of these take some combination of Maths, Geography and History. The number who take Geography is 41; those who take History is 36; and 30 take Maths. The number who take Maths and History is 16; the number who take Geography and History is 6, and there are 8 who take Maths only and 16 who take History only.

How many learners take Geography only?

Options

- 24
- 29
- 34
- 39

[Correct Answer: 29](#)

Q17 : Take All Three Subjects?

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There are 79 Grade 10 learners at school. All of these take some combination of Maths, Geography and History. The number who take Geography is 41; those who take History is 36; and 30 take Maths. The number who take Maths and History is 16; the number who take Geography and History is 6, and there are 8 who take Maths only and 16 who take History only.

How many learners take all three subjects?

Options

- 8
- 6

4
2

Correct Answer : 2

Q18 : Weight Of Pipe

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A hollow iron pipe is 21 cm long and its external diameter is 8 cm. If the thickness of the pipe is 1 cm and iron weighs 8 g/cm³, then the weight of the pipe is:

Options

3.6 kg
36 kg
36.9 kg
3.696 kg

Correct Answer

Solution Description

External radius = 4 cm

Internal radius = 4 - 1 = 3 cm

Volume of iron = $\frac{22}{7} \times [4^2 - 3^2] \times 21 = 462 \text{ cm}^3$

So the required weight = $8 \times 462 = 3696 \text{ gm}$ or 3.696 kg. Hence, option d is correct.

Q19 : Increase In Area Of Circle

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The radius of circle is so increased that its circumference increased by 5%. The area of the circle then increases by

Options

12.5%
10.25%
10.5%
11.25%

Correct Answer

Solution Description

Circumference of a circle = $2 \times 3.14 \times r$, where r is the radius.

Circumference \sim radius

As the circumference increases by 5%, the radius also increases by 5%

New radius = $1.05r$

As area \sim (radius)²

New area = $(1.05)^2 \times \text{old area} = 1.1025 \times \text{old area}$

Percentage increase in area = 10.25%. Hence, option (b) is correct.

Q20 : Mark Option

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The area of an isosceles triangle is 12 sq. cm. If one of the equal sides is 5 cm long, mark the option which can give the length of the base.

Options

4 cm

5 cm

8 cm

9 cm

[Correct Answer: 8cm](#)

Q21: Volume Of Box

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A rectangular piece of cardboard $18\text{cm} \times 24\text{cm}$ is made into an open box by cutting a square of 5 cm side from each corner and building up the side. What is the volume of the box?

Options

480

630

420

560

[Correct Answer: 560](#)

Q22: How many cuboids?

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How many cuboids of different dimensions can be assembled with 100 identical cubes?

Options

9

8

12

10

[Correct Answer: 8](#)

Q23: Volume Of Cone

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The volume of the largest right circular cone that can be cut out of a cube of edge 7 cm is:

Options

89.8 cm³
147.68 cm³
13.6 cm³
121 cm³

Correct Answer: 89.8 cm³

Q24: By What Percent?

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By what percent the volume of a cube increases, if the length of each edge increased by 50%:

Options

237.5%
273.5%
125%
50%

Correct Answer: 237.5 %

Q25 : Length Of Smallest Side

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The ratio of sides of a triangle is 3:4:5. If area of the triangle is 72 square unit, then the length of the smallest side is:

Options

$4\sqrt{3}$ unit
 $5\sqrt{3}$ unit
 $6\sqrt{3}$ unit
 $3\sqrt{3}$ unit

Correct Answer: option C

Q26: Find the area?

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The perimeter of a rhombus is 40 m and its height is 5 m. its area is:

Options

60 m²
50 m²
45 m²
55 m²

Correct Answer: option B