



MATHS

BOOKS - SELINA MATHS (ENGLISH)

SAMPLE PAPER 3

Question Section A

1. _____ taxes are those that are levied on the income of individuals or organisation.

A. Direct

B. Indirect

C. Both (a) and (b)

D. None of these

Answer: A



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2. If Ram opened a recurring deposit account in a bank and deposited Rs 8,000 per month for

$1\frac{1}{2}$ years, then total money deposited in the account is:

A. Rs 1,14,000

B. Rs 1,44,000

C. Rs 1,36,800

D. Rs 1,38,600

Answer: B



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3. An equation with one variable in which the highest power of the variable is two is known as _____

- A. Linear equation
- B. Quadratic equation
- C. Cubic equation
- D. None of these

Answer: B



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4. If $(3a + 2b) : (5a + 3b) = 18 : 29$, find a:b

A. 3:4

B. 4:3

C. 2:3

D. 3:2

Answer: B



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5. For the quadratic equation $ax^2 + bx + c = 0$, $a \neq 0$, _____ is called its discriminant.

A. $D = b - 4ac$

B. $D^2 = b^2 - 4ac$

C. $D = b^2 - 4ac$

D. None of these

Answer: C



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6. If the order of the matrix A is $m \times n$ and the order of the matrix B is $n \times p$, then the order of matrix A.B is:

A. $m \times n$

B. $n \times p$

C. $m \times p$

D. $p \times p$

Answer: C



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7. When was GST implemented in India?

A. 1st Jan 2017

B. 1st April 2017

C. 1st July 2017

D. None of these

Answer: C



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8. Ashi deposits Rs 2,500 per month for one year in a bank's recurring deposit account. If the rate of (simple) interest is 8% per annum, then the interest earned by her is:

A. Rs 650

B. Rs 1,200

C. Rs 1,300

D. Rs 1,260

Answer: C



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9. If discriminant, $D = 0$, then the roots of the quadratic equation are:

A. real and unequal

B. real and equal

C. imaginary

D. None of these

Answer: B



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10. Inter State means:

- A. within a state
- B. between two or more staes
- C. between two organisations
- D. between two countries

Answer: B



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11. If $A = \begin{bmatrix} -2 & 3 \\ 4 & 1 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 2 \\ 3 & 5 \end{bmatrix}$, then

find AB .

A. $\begin{bmatrix} 6 & 5 \\ 14 & 14 \end{bmatrix}$

B. $\begin{bmatrix} 7 & 11 \\ 7 & 13 \end{bmatrix}$

C. $\begin{bmatrix} 7 & 13 \\ 11 & 7 \end{bmatrix}$

D. $\begin{bmatrix} 8 & 11 \\ 12 & 13 \end{bmatrix}$

Answer: B



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12. If $\sqrt{\frac{2}{3}}$ is a solution of equation $3x^2 + mx + 2 = 0$, then the value of m is:

A. $\pm 2\sqrt{6}$

B. $-2\sqrt{6}$

C. $2\sqrt{6}$

D. 0

Answer: B



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Question Section B

1. An article was purchased for Rs 1,239 including GST of 18%. Price of the article before GST was:

A. Rs 1,000

B. Rs 1,100

C. Rs 1,050

D. Rs 1,239

Answer: C



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2. Mr. Jain deposited Rs 500 per month in a cumulative deposit account for 2 years. If the bank pays interest at the rate of 7% per annum, then the amount he gets on maturity is:

A. Rs 875

B. Rs 6,875

C. Rs 10,875

D. Rs 12,875

Answer: D



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3. Evaluate: $\begin{bmatrix} 4\sin 30^\circ, 2\cos 60^\circ \\ \sin 90^\circ, 2\cos 0^\circ \end{bmatrix} \begin{bmatrix} 4 & 5 \\ 5 & 4 \end{bmatrix}$

A. $\begin{bmatrix} 4 & 5 \\ 5 & 4 \end{bmatrix}$

B. $\begin{bmatrix} 2 & 1 \\ 1 & 2 \end{bmatrix}$

C. $\begin{bmatrix} 13 & 14 \\ 14 & 13 \end{bmatrix}$

D. $\begin{bmatrix} 14 & 13 \\ 13 & 14 \end{bmatrix}$

Answer: C



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4. Two numbers are in the ratio $3:5$. If 8 is added to each number, the ratio becomes $2:3$. Find the numbers.

A. 8, 24

B. 24, 32

C. 24, 40

D. 6, 10

Answer: C



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5. Find the solution set for the following inequality:

$$-\frac{1}{5} \leq \frac{3x}{10} + 1 < \frac{2}{5}, x \in R$$

A. $\{x : x \in R, -4 \leq x < -2\}$

B. $\{x : x \in R, -4 \leq x \leq -2\}$

C. $\{x : x \in R, -4 < x < -2\}$

D. None of these

Answer: A



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6. Pankaj deposited Rs 400 every month in a bank's recurring deposit account for $2\frac{1}{2}$ years.

If he gets Rs 1,085 as interest at the time of maturity, then the rate of interest per annum

is:

A. 6 %

B. 7 %

C. 8 %

D. 9 %

Answer: B



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Question Section C

1. A dealer in Bhopal (MP) say X, supplies goods and services worth Rs 8,000 to a person

Y in Indore (MP). If the rate of GST is 28%, then

What is the full form of GST?

- A. Goods and Sales Tax
- B. Goods and Services Tax
- C. Government and State Tax
- D. None of these

Answer: B



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2. A dealer in Bhopal (MP) say X, supplies goods and services worth Rs 8,000 to a person Y in Indore (MP). If the rate of GST is 28%, then Find the rate of CGST (central GST)

A. 28 %

B. 14 %

C. 7 %

D. 0 %

Answer: B



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3. A dealer in Bhopal (MP) say X, supplies goods and services worth Rs 8,000 to a person Y in Indore (MP). If the rate of GST is 28%, then Find the amount of SGST

- A. Rs 8,000
- B. Rs 4,000
- C. Rs 2,240
- D. Rs 1,120

Answer: D



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4. A dealer in Bhopal (MP) say X, supplies goods and services worth Rs 8,000 to a person Y in Indore (MP). If the rate of GST is 28%, then Find the amount after GST

A. Rs 8,000

B. Rs 9,120

C. Rs 10,240

D. Rs 12,000

Answer: C



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5. In a class the teacher asked every student to write an example of A.P. Two friends Geeta and Madhuri writes their progressions as $-5, -2, 1, 4, \dots$ and $187, 184, 181, \dots$ respectively. Now the teacher asked other students of the class the following questions

on these two progressions. Help students to find the answer of following questions.

Find the 34^{th} term of the progression written by Madhuri

A. 286

B. 88

C. -99

D. 190

Answer: B



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Find the sum of common difference of the two progressions.

A. 6

B. -6

C. 1

D. 0

Answer: D



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...respectively. Now the teacher asked other students of the class the following questions on these two progressions. Help students to find the answer of following questions.

Find the 19th term of the progression written by Geeta

A. 49

B. 59

C. 52

D. 62

Answer: A



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Find the sum of first 10 terms of the progression written by Geeta.

A. 85

B. 95

C. 110

D. 200

Answer: A



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9. Car A travels x km for every litre of petrol, while car B travels $(x+5)$ km for every litre of petrol.

Petrol used (in litres) by car A and car B in covering a distance of 400km

A. $\frac{400}{x}$

B. $\frac{x}{400}$

C. $400x$

D. $\frac{400}{x + 5}$

Answer: A



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10. Car A travels x km for every litre of petrol, while car B travels $(x+5)$ km for every litre of petrol.

No. of litres of petrol used by car B in covering distance of 400km.

A. $\frac{400}{x}$

B. $\frac{x + 5}{400}$

C. $\frac{400}{x + 5}$

D. $\frac{x}{400}$

Answer: C



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11. Car A travels x km for every litre of petrol, while car B travels $(x+5)$ km for every litre of petrol.

If car A uses 4 litres of petrol more than car B in covering 400km, then the quadratic equation formed is:

A. $x^2 - 5x - 500 = 0$

B. $x^2 + 5x - 500 = 0$

C. $x^2 + 5x + 500 = 0$

D. None of these

Answer: B



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12. Car A travels x km for every litre of petrol, while car B travels $(x+5)$ km for every litre of petrol.

No. of litres of petrol used by car A.

A. 16

B. 25

C. 10

D. 20

Answer: D



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