

Math Part Solutions (Q.91–120)

Q. No.	Answer	Q. No.	Answer
91	(D) $10+8 \times y$	106	(B) 20, 28
92	(C) 3, 5	107	(A) Patterns and order
93	(B) c	108	(B) Galileo
94	(D) 23/20 m	109	(C) Rubric
95	(A) AAA condition	110	(C) Srinivasa Ramanujan
96	(A)	111	(C) Mathematical fractals
97	(B) 10,000 lakhs	112	(D) Enriching teachers...
98	(A) $p+q+r$	113	(B) Proof
99	(B) 12:30 am	114	(A) concrete to abstract
100	(A) 2	115	(B) Napoleon Bonaparte
101	(C) Non-terminating...	116	(C) Rigveda
102	(C) Circle	117	(C) One-fourth
103	(D) Square	118	(A) 6174
104	(C) LCM of k and m	119	(B) Visual representation
105	(B) 36 minutes	120	(D) triangular numbers

MCQs (Q.91–120)

91.

Venkatalakshmi owns a flour mill. It takes 10 seconds for the roller mill to start running. Once it is running, each kg of grain takes 8 seconds to grind into powder. Which expression describes the time taken to grind y kg of grain?

- A) $10 + 8 + y$
- B) $(10 + 8)y$
- C) $10 \times 8 \times y$
- D) $10 + 8y$

92.

Find the missing numbers in the sequence:

1, 2, __, __, 8, 13, 21, 34, 55, 89

- A) 5, 7
- B) 4, 6
- C) 3, 5
- D) 2, 4

93.

Which algebraic expression is true?

- a. The expression $4m - 1$ always gives odd numbers.
- b. All even numbers can be expressed as $6j - 4$.

c. Both expressions $2p + 1$ and $2q - 1$ describe all odd numbers.

d. The expression $2f + 3$ gives both even and odd numbers.

A) b

B) c

C) d

D) a

94.

Geeta bought $\frac{2}{5}$ m of lace and Shamim bought $\frac{3}{4}$ m of the same lace to put a border on a table cloth whose perimeter is 1 m. Find the total length of lace they bought.

A) $\frac{29}{20}$ m

B) $\frac{17}{20}$ m

C) $\frac{11}{20}$ m

D) $\frac{23}{20}$ m

95.

Which of the following is not a condition for congruency of triangles?

A) AAA condition

B) SAS condition

C) ASA condition

D) AAS condition

96.

Which statement is true for any two positive integers?

A) $\text{HCF} \times \text{LCM} = \text{Product of the two numbers}$

B) $\text{HCF} + \text{LCM} = \text{Product of the two numbers}$

C) $\text{HCF} \div \text{LCM} = \text{Product of the two numbers}$

D) $\text{HCF} - \text{LCM} = \text{Product of the two numbers}$

97.

How many lakhs make a billion?

A) 1,000 lakhs

B) 10,000 lakhs

C) 1,00,000 lakhs

D) 100 lakhs

98.

Pushpita sells two types of flowers on Independence Day: champak and marigold.

p customers bought only champak, q customers bought only marigold, and r customers bought both. She gave a national flag to every customer. How many flags did she give away?

A) $p + q + r$

B) $p + q + 2r$

C) $2 \times (p + q + r)$

D) $p + q + r + 2$

99.
Safia saw the Moon setting on Monday at 10 pm. The Moon sets $\frac{5}{6}$ hour later each day. How many hours after 10 pm will the Moon set on Thursday?
A) 11:30 pm
B) 12:30 am
C) 1:30 am
D) 10:30 pm

100.
How many diagonals does a convex quadrilateral have?
A) 2
B) 1
C) 0
D) None of these

101.
The decimal expansion of an irrational number is:
A) Terminating
B) Non-terminating but recurring
C) Non-terminating and non-recurring
D) Terminating and recurring

102.
If a line segment joining two points subtends equal angles at two other points on the same side, then the four points lie on a:
A) Straight line
B) Triangle
C) Circle
D) Parallelogram

103.
Show that the points (1,7), (4,2), (-1,-1), (-4,4) are the vertices of a:
A) Rectangle
B) Rhombus
C) Parallelogram
D) Square

104.
If A is divisible by k and m, then A is divisible by the:
A) $k + m$
B) $k - m$
C) LCM of k and m
D) HCF of k and m

105.

If Ram takes 1 hour to cut a quantity of vegetables and Shyam takes 1.5 hours for the same work, how much time will they take if they work together?

- A) 30 minutes
 - B) 36 minutes
 - C) 45 minutes
 - D) 1 hour
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106.

The ages of Hari and Harry are in the ratio 5:7. Four years from now the ratio will be 3:4.

Their present ages are:

- A) 25, 35
 - B) 20, 28
 - C) 15, 21
 - D) 30, 42
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107.

Mathematics is a study of _____ dealing with numbers, geometrical objects, forms, algorithms, chance and change.

- A) Patterns and order
 - B) Historical facts
 - C) Language and literature
 - D) Natural resources
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108.

Who said: "Mathematics is the language with which God wrote the Universe"?

- A) Isaac Newton
 - B) Galileo
 - C) Albert Einstein
 - D) Pythagoras
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109.

A set of guidelines for assessment with clear performance criteria and rating scale is called:

- A) Checklist
 - B) Anecdotal record
 - C) Rubric
 - D) Observation schedule
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110.

Which Indian mathematician of the early 19th century contributed remarkably to number theory, hypergeometric series and elliptic functions?

- A) Aryabhatta
- B) Bhaskaracharya
- C) Srinivasa Ramanujan
- D) Brahmagupta

111.

The Sierpinski Carpet, Sierpinski Gasket and Koch Snowflake are examples of:

- A) Mathematical sequences
 - B) Geometrical solids
 - C) Mathematical fractals
 - D) Algebraic curves
-

112.

Which of the following is not a problem in teaching mathematics?

- A) Sense of fear and failure among children
 - B) Curriculum disappointing both talented and weak students
 - C) Crude assessment encouraging mechanical computation
 - D) Enriching teachers with mathematical resources
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113.

The method of establishing the truth of a proposition is called:

- A) Verification
 - B) Proof
 - C) Assumption
 - D) Observation
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114.

While acquiring concepts, mathematics curriculum should incorporate the progression from:

- A) Concrete experiences to abstract thinking
 - B) Memorisation to procedural fluency
 - C) Informal reasoning to formal mathematical logic
 - D) Simple recall to complex problem-solving
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115.

Who said: "The progress and improvement of Mathematics are linked with the prosperity of the state"?

- A) Carl Friedrich Gauss
 - B) Napoleon Bonaparte
 - C) Henri Poincaré
 - D) Isaac Newton
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116.

Which ancient text speaks of a wheel with 360 spokes (Verse 1.164.48)?

- A) Arthashastra
 - B) Aranyakas
 - C) Rigveda
 - D) Yajnavalkya Smriti
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117.

If a straight angle is half of a full turn, how much of a full turn will form a right angle?

- A) One-half of a full turn
 - B) One-third of a full turn
 - C) One-fourth of a full turn
 - D) One-sixth of a full turn
-

118.

Which number is called the Kaprekar constant?

- A) 6174
 - B) 1089
 - C) 1729
 - D) 1001
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119.

What is an infographic?

- A) Long written explanation using only text
 - B) Visual presentation of information or data
 - C) Numerical table without images
 - D) Detailed research article
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120.

1, 3, 6, 10, 15, ... are called:

- A) Cube numbers
- B) Square numbers
- C) Ordinary numbers
- D) Triangular numbers

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