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Previous Year Paper

Mathematics - 2015



Multiple Choice Questions

1. The alternate vertices of a regular pentagon are joined to form a star having five vertices. The sum of all five vertical angles of this star will be

A. 150°
B. 180°
C. 210°
D. 540°

Answer

2. A cuboid is of dimensions 5 cm x 2 cm x 5 cm. How many such cuboids may be joined to form a cube ?

A. 32
B. 16
C. 25
D. 20

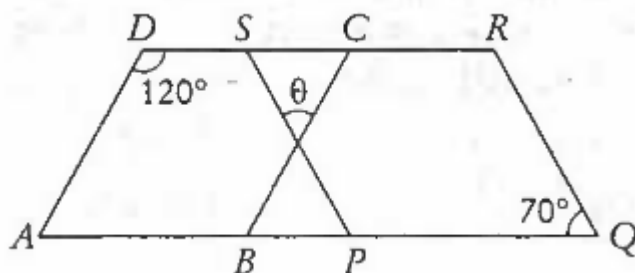
Answer

3. In a right triangle, the square of hypotenuse is equal to twice the product of remaining two sides. If the base of this triangle is 12 cm, then the perpendicular of triangle will be

A. 12cm
B. $10/2$ cm
C. 9cm
D. 6cm

Answer

4. In the given figure, both ABCD and PQRS are the parallelograms. The value of θ will be



A. 50°
B. 45°
C. 40°

Answer

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5. The difference between the simple interest and compound interest on a certain sum of money at 4% per annum for two years is Rs. 10. The sum will be
- A. 4500
 - B. 5500
 - C. 5750
 - D. 6250

Answer

6. The wheel of an engine, 17.5 cm in radius, makes 1200 revolutions in 2 min. Speed of the engine is
- A. 10m/s
 - B. 11m/s
 - C. 12m/s
 - D. 12.5m/s

Answer

7. "The sum of two whole numbers is also a whole number." This property of whole numbers is known as
- A. associative property of addition
 - B. commutative property of addition
 - C. closure property of addition
 - D. property of componendo-dividendo

Answer

8. The mean of the median and mode of the observations 6, 6, 9, 14, 8, 9, 9, 8 is
- A. 8.5
 - B. 8.625
 - C. 8.75
 - D. 8.9

Answer

9. The sum of the length, breadth and depth of a cuboid is 20 cm and its diagonal is 45 cm. The surface area of cuboid will
- A. 320cm^2
 - B. 365cm^2
 - C. 3805cm^2
 - D. 400cm^2

Answer

10. A number when divided by 899 gives a remainder 63. If the same number is divided by 29, the remainder will be
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B. 5

C. 7

D. 9

Answer

11. If $6412 \div 415 = 64?$, 64, then what will come in place of question mark (?) ?

A. 3

B. 5

C. 7

D. 9

Answer

12. If $a^2 = 13 + 23 + 33$, $b^2 = 13 + 23 + 33 + 43$ and $c^2 = 13 + 23 + 33 + 43 + 53$, then the value of $a + b + c$ is

A. 33

B. 31

C. 27

D. 25

Answer

13. A positive integer is selected at random and is divided by 7. What is the probability-that the remainder is not 1?

A. 17

B. 27

C. 67

D. 1

Answer

14. Which of the following is not a 'proposition ?

A. Sum of 2 and 5 is 7

B. An angle consists' of two rays and one vertex

C. Is 7 the sum of 2 and 5 ?

D. Sum of 2 and 5 is 6

Answer

15. Which of the following is a perfect number ?

A. 28

B. 36

C. 10

D. All of these

Answer

16. A box contains a dozen bulbs in which few are defective and remaining are good. Which of the following cannot be a ratio of defective bulbs to good bulbs ?

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C. 1 : 3

D. 1 : 4

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Answer

17. There are three sections A, B and C in Class X with 25, 40 and 35 students respectively. The average marks obtained "by sections A, B and C are 70%, 65% and 50% respectively. The average marks of entire Class X is
- A. 60%
 - B. 61%
 - C. 61.66%
 - D. 65%

Answer

18. Which evaluation involves gathering information about the students errors, reasons for those errors, depth of conceptual understanding, effective means of intervention ?
- A. Diagnostic evaluation
 - B. Formative evaluation
 - C. Prognostic evaluation
 - D. Summative evaluation

Answer

19. If the sum of five successive integers are S, then the value of largest integer in terms of S will be
- A. $S - 105$
 - B. $S + 54$
 - C. $S + 55$
 - D. $S + 105$

Answer

20. In a sports competition, 5 players are participating. It is compulsory for each player to play match with every other player. How many matches will be played?
- A. 10
 - B. 12
 - C. 16
 - D. 20

Answer

21. Which of the following options does not demonstrate the achievement of skill objectives of teaching, school mathematics in upper primary stages?
- A. The pupil handles geometrical instruments with ease and proficiency
 - B. The pupil measures accurately
 - C. The pupil solves routine type of problems using a formula
 - D. The pupil does written calculation with ease and speed

Answer

22. X runs twice as fast as Y and Y runs thrice as fast as Z. If the distance covered by Z in 72 min, will

A. 24min

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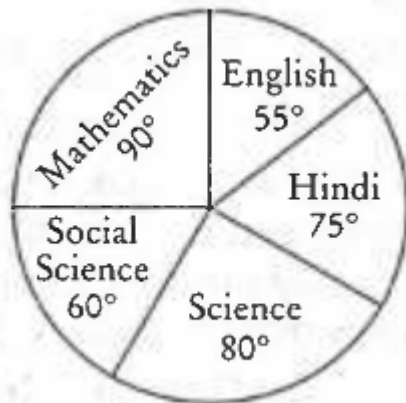
B. 18min

C. 16min

D. 12min

Answer

23. The given Pie-chart shows the marks scored by a student in different subjects in an examination. If the total marks obtained by the student be 648, then marks scored in English, Science and Social Science exceed the marks scored in Hindi and Mathematics by



A. 66

B. 54

C. 48

D. 30

Answer

24. The mean of n observations is m . If $m^2 - m + 1$ is added to each observation, what will be the value of new mean ?

A. $m^2 - 1$

B. $m^2 - 2m + 1$

C. $m^2 + 1n$

D. $1 + m^2$

Answer

25. If $(3a + 5b) : (3a - 5b) = 5 : 1$, then the value of $a : b$ will be

A. 3 : 2

B. 5 : 3

C. 2 : 1

D. 5 : 2

Answer

26. The production of company X is 120% of the production of company Y and 80% of the production of company Z. The respective ratio between the production of companies X, Y and Z is

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B. 6 : 5 : 9

C. 10 : 9 : 12

D. 12 : 10 : 15

Answer

27. "In a triangle, if two sides are equal, then the angles opposite to equal sides have equal measures." The inverse of this theorem will be
- A. In a triangle, if the angles opposite to two sides have equal measures, then the two sides are equal
 - B. In a triangle, if two sides are not equal, then the angles opposite to these two sides do not have equal measures
 - C. In a triangle, if its measures of angles opposite to two sides are not equal, then the two sides are not equal
 - D. All of the above

Answer

28. A shopkeeper sells 25 books at the rate of Rs 45 per book after giving 10% discount and gain 50% profit. If the discount is not given, then profit per cent will be
- A. 60
 - B. 66
 - C. 6613
 - D. 6623

Answer

29. Three numbers are in the ratio of 3:4:5 and their LCM is 2400. Their HCF is
- A. 24
 - B. 36
 - C. 40
 - D. 60

Answer

30. In reference to difference between teaching of Mathematics and teaching of Science, the wrong statement is
- A. Teaching of mathematics starts with well defined terms, axioms, theorems while teaching of science starts with evidence and explanations.
 - B. Teaching of science involves only deductive process while teaching of mathematics involves a combination of both inductive and deductive processes
 - C. Mathematics is a man-made universe while Science is a natural one
 - D. In teaching of science, the results are validated through experiments, in teaching of mathematics experimentations are the means to verify some of the probable results

Answer