MATHS

BOOKS - PEARSON IIT JEE FOUNDATION

MOCK TEST PAPER

Multiple Choice Questions

1. ABCD is an isosceles trapezium in which $\overline{AB}||\overline{CD}$ and $\angle A = 57^\circ$. Find the value of $\angle C + \angle D$.

A. 112°

B. 123°

C. 246°

D. 303°

Answer: C

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2. PQRS is a parallelogram , if $\angle PQS = 40^\circ$ and $PS = QS$, then $\angle SQR - \angle QRS$ = _____.

A. 60°

B. 20°

C. 30°

D. 45°

Answer: A

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3. The following are the steps involved in constructing an incircle of a triangle .Arrange them in sequential order .

(A) Draw the bisectors of internal angles of the given triangle .

(B) Let the point of concurrence of the angle bisectors be I .

(C) Draw the triangle with the given measurements.

(D) With ID perpendicular to any of the sides of the triangle .

A. ABCDE

B. CBADE

C. ACEBD

D. CABED

Answer: D

4. In a triangle PQR , the point of concurrence of medians and the point of concurrence of altitudes coincide and it is G . If altitude of the triangles is 9 cm , then find the length of PG .

A. 3 cm

B. 6 cm

C. 9 cm

D. 12 cm

Answer: B

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5. If $\frac{3x}{2} + \frac{4}{7}\left(\frac{9x}{4} - \frac{7}{8}\right) - 1 = \frac{2}{7}\left(1 + \frac{3x}{8}\right)$, then x = _____.

A. $\frac{1}{3}$

B. $\frac{3}{2}$

C. $\frac{2}{3}$

D. 3

Answer: C

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6. Find out the number of positive integral solutions of the equation $\frac{3x-8}{2} < \frac{3x+10}{5}$

A. 2

B. 3

C. 5

D. 6

Answer: D

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7. One of the equal sides of an isosceles triangle is 13 cm and length of the altitude drawn to unequal side is 5 cm . What is the area of the triangle ?

A. $50cm^2$

B. $38cm^2$

C. $60cm^2$

D. $28cm^2$

Answer: C

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8. The area of a square is $2^4 \times 3^6 \times 5^{10}$ sq. cm .Find the length of its diagonal (in cm) .

A. $2^2 \times 3^3 \times 5^6 . \sqrt{2}$

B. $2^2 \times 3^4 \times 5^5 . \sqrt{2}$

C. $2^2 \times 3^3 \times 5^5 . \sqrt{2}$

D. $2^3 \times 3^3 \times 5^2 . \sqrt{2}$

Answer: C

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9. In a trapezium , the sum of the lengths of the parallel sides is 32 cm and the area of the trapezium is 128 sq. cm . Calculate the distance between the parallel sides .

A. 7 cm

B. 8 cm

C. 10 cm

D. 12 cm

Answer: B

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10. The perimeter of the triangular base of a right prism is 60 cm and the sides of the base are in the ratio 5:12: 13. Then, its volume will be (height of the prism being 50 cm)

A. 2.20 cm

B. 2.16 cm

C. 2.32m

D. 2.18 m

Answer: B

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11. $\left(5x^2 + 12x + 7\right) \div (5x + 7) =$ _____

A. $x + 5$

B. $x + 3$

C. $x + 5$

D. $x + 1$

Answer: D

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12. If

$x^6 + 64y^6 = (Ax^2 + By^2)(Cx^4 + Dx^2y^2 + Ey^4)$

, then $A + B + C + D + E$ = _____

A. 16

B. 18

C. 26

D. 20

Answer: B

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13. The product of LCM and HCF of $\frac{4}{5}, \frac{6}{7}$ and $\frac{7}{9}$ is _____.

A. $\frac{4}{5}$

B. $\frac{3}{7}$

C. $\frac{8}{15}$

D. $\frac{5}{7}$

Answer: C

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14. Find the least number which leaves a remainder of 6 when divided by 8,12 ,or 15.

A. 54

B. 78

C. 102

D. 126

Answer: D

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15. If $\frac{7}{3}x^2 - 10 = \frac{7}{5}x^2 + 200$, then what can be the value of x ?

A. 5

B. 10

C. 15

D. 20

Answer: C

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16. If $\sqrt[3]{-27} + \sqrt{729} - \sqrt[3]{216} = x$, then $\sqrt{32x}$ = _____.

A. 24

B. 33

C. 28

D. 18

Answer: A

17. The sum of the digits of a two -digit number is eight IF eigteen is added to the number ,

then the digits of the number get interchanges

.Find the number .

A. 26

B. 17

C. 35

D. 62

Answer: C

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18. Ashok had a total of ₹ 60 in the form of ₹ 5 coins, ₹ 2 coins and ₹ 1 coins. The number of ₹ 2 coins is twice that of ₹ 5 coins and the number of ₹ 1 coins is thrice that of ₹ 5 coins. Find the number of ₹ 1 coins with him. '

A. 15

B. 10

C. 5

D. 20

Answer: A

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19. A trader presently earns 15 % profit by selling his product .If he increases the price of the product by Rs 24 , then his gain per cent increases to 27 % .Find the cost price of the product .

A. Rs 20

B. Rs 200

C. Rs 150

D. Rs 160

Answer: B

20. The ratio of incomes of A and B is 3:4. The ratio of their expenditures is 4:5. Find the ratio of their savings if the savings of A is one fourth of his income.

A. X

B. Y

C. Both spend equal parts of their incomes .

D. Cannot say

Answer: A

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Questions

1. What is the least positive integar that should be added to 720 so that the sum is a perfect cube ?

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2. A is twice as good a workman as B and C is thrice as good a workman as B and C is thrice as good a workman as B . If A, B and C together can complete a work in 2 days , then in how many days can A alone complete the work ?

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3. A and C started doing a work . After working for 6 days , both left and B alone completed the remaining work in 4 days .In how many days can

C alone complete a work in 2 days , then in how many days can A alone complete the work ?

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4. A and B can complete a piece of work in 15 days and 10 days, respectively . They work together for 4 days and then B leavs. In how many days will A alone complete the remaining work ?

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5. Pipe A can fill a tank in 40 minutes . Pies B can empty the tank in 30 minutes . If both the pipes are opened simultaneously when tank is half full, then will be tank become full or empty?

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