



# 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.  $112^{\circ}$ 

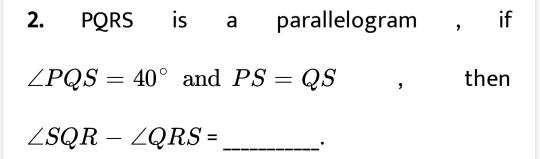
B.  $123^{\circ}$ 

C.  $246^{\circ}$ 

D.  $303^{\,\circ}$ 

#### Answer: C

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A.  $60^{\circ}$ 

B.  $20^{\circ}$ 

C.  $30^{\circ}$ 

D.  $45^{\,\circ}$ 

**Answer: A** 



**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**



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.  $50cm^2$ 

 $\mathsf{B.}\,38cm^2$ 

 $\mathsf{C.}\,60 cm^2$ 

D.  $28 cm^2$ 

#### Answer: C

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

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

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

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

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

#### Answer: C



**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 .

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.  $2.20\ \mathrm{cm}$ 

 $\mathsf{B}.\,2.16~\mathsf{cm}$ 

 $\mathsf{C.}\,2.32\mathsf{m}$ 

 $\mathsf{D}.\,2.18~\mathsf{m}$ 

#### **Answer: B**

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**11.** 
$$(5x^2 + 12x + 7) \div (5x + 7) = \_$$

A. x + 5

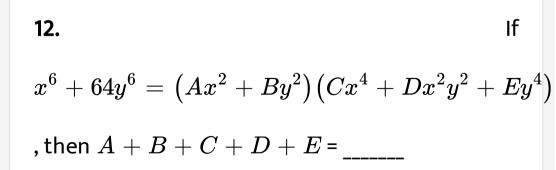
 $\mathsf{B.}\,x+3$ 

C. x + 5

D. x + 1

#### Answer: D





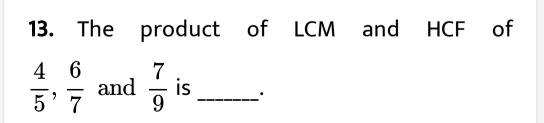
B. 18

C. 26

D. 20

#### **Answer: B**





A. 
$$\frac{4}{5}$$
  
B.  $\frac{3}{7}$   
C.  $\frac{8}{15}$   
D.  $\frac{5}{7}$ 

#### Answer: C



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

B. 78

C. 102

D. 126

#### Answer: D

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15. If 
$$rac{7}{3}x^2 - 10 = rac{7}{5}x^2 + 200$$
 , then what can

be the value of x ?

B. 10

C. 15

D. 20

#### Answer: C

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

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



**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



**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

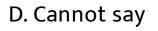


**20.** The ratio of incomes of A and B is 3:4. The ratio of their expenditures is 4:5. Find the ratio of their savings if the savings of A is one fourth of his income.

**A.** X

B. Y

C. Both spend equal parts of their incomes .





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



**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 ?



**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?



**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 ?



**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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