



Studybox Doon

RIMC Mock test 2 Maths

Exam ID: 218



Name: _____

Date: _____

Exam Instructions

1. The timer has been set for the exam, and a countdown will display the remaining time. When the timer runs out, the exam will end automatically. No further action will be required after that.
2. You can flag any question that you want.
3. If you don't want to submit any of your provided answers, you can clear them.
4. If you choose to drop this exam, it will not be submitted, and no result will be generated.
5. Once you finish the exam, you cannot resume it.

Question: 1 of 30

QID: 11837

Marks: 5

Find the largest number that will divide 398, 436 and 542, leaving remainders 7, 11 and 15 respectively.

Please write your answer below.

Simplify

$$\frac{\sqrt{1204.09} - \sqrt{125.44}}{\sqrt{1204.09} + \sqrt{125.44}}$$

Please write your answer below.



The adjacent sides of a rectangle are $-6p^3 + 7p^2q^2 + pq$ and $7pq - 5p^3 + 9p^2q^2$. Find its perimeter.

Please write your answer below.



Show that
$$\frac{a^{-17} \times (a^4)^8 \times (8a^3)^{\frac{2}{3}}}{(16a^4)^{\frac{1}{4}} \times (a^2)^8} = 2$$

Please write your answer below.



Prove that the interior angle of a regular polygon is three times the exterior angle of a regular decagon.

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Please write your answer below.



The price of sugar increased by 20%. By how much percent should Dinesh reduce his consumption of sugar so that expenditure of sugar does not increase?

Please write your answer below.



The LCM of two numbers is 9 times their HCF. The sum of HCF and LCM is 500. Find their HCF.

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Please write your answer below.



Solve $\left(\frac{x+1}{x+2}\right)^2 = \frac{x+2}{x+4}$

Please write your answer below.



A man loses 20% of his money. After spending 25% of the remainder, he has Rs 480.00 left. How much money did he originally have?

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Please write your answer below.



Factorise the following

(a) $x^2 - y^2 - 9z^2 + 6yz$

(b) $3 - 12(a - b)^2$

Please write your answer below.



Distance between two station A and B is 690 Km. Two cars start simultaneously from A and B towards each other and the distance between them after 6 hours is 30 Km. If the speed of one car is less than the other by 10 km/hr, find the speed of each car.

Please write your answer below.



2.2 cubic dm of brass is to be drawn into a cylindrical wire 0.50cm in diameter. Find the length of the wire.

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Please write your answer below.



The sum of three consecutive numbers is 156. Find the number which is a multiple of 13 out of these numbers.

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Please write your answer below.



Evaluate $\sqrt[3]{968} + \sqrt[3]{1375}$

Please write your answer below.



If $\frac{3}{5}$ of a number exceeds its $\frac{7}{2}$ by 44. Find the number.

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Please write your answer below.



If $x + 1/x = 11$, then find the value of following

(a) $x^2 + 1/x^2$

(b) $x^4 + 1/x^4$

Please write your answer below.



In an auditorium, 300 tickets were sold. The total sale of tickets was Rs 1250. If the ticket were of two denominations of Rs2.50 and Rs5. How many of each denomination were sold?

Please write your answer below.



A die is tossed once. List the outcomes. Also find the probability of (a) Getting an even Prime Number (b) Getting non prime and non composite No.

Please write your answer below.

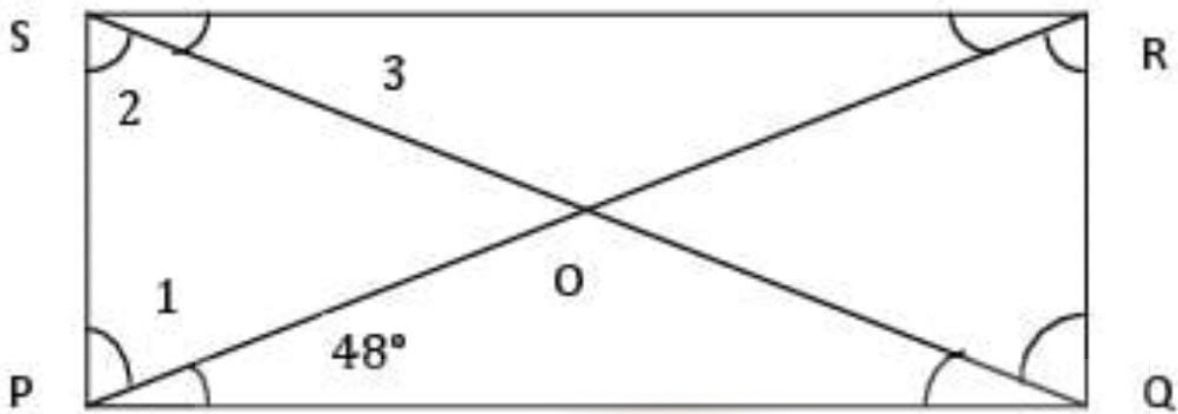


Shalini has to cut out circles of diameter $1\frac{1}{4}$ cm from an aluminium strip of dimensions $8\frac{3}{4}$ cm by $1\frac{1}{4}$ cm. How many full circles can shalini cut? Also calculate the wastage of the Aluminium strip?

Please write your answer below.



The rectangle PQRS, angle OPQ = 48° , find angle RSQ.



Please write your answer below.



Some toffees are bought at 9 for Rs10 and an equal number at 11 for Rs10. If all toffees are sold at 10 for Rs10, find the gain or loss percent.

Please write your answer below.



A lead pencil consists of a cylinder of wood with a solid cylinder of graphite filled into it. The diameter of pencil is 7mm, the diameter of the graphite is 1mm and length of pencil is 10cm. Calculate the weight of the whole pencil, if the specific gravity of the wood is 0.7gm/cm^3 and that of the graphite is 2.1gm/cm^3 .

Please write your answer below.



The difference between the compound interest and simple interest on a certain sum of money at 10% per annum for 2 years is Rs 500. Find sum when the interest is compounded annually.

Please write your answer below.



120 men had food provision for 200 days. After 5 days, 30 men died due to an epidemic. How long will the remaining food last?

Please write your answer below.



Find the value of p if:

(a) $89 = (59)^2 - (51)^2$

(b) $abp = (3a + b)^2 - (3a - b)^2$

(c) $143p = (76)^2 - (67)^2$

(d) $441 - p^2 = (21)^2 - (17)^2$

Please write your answer below.



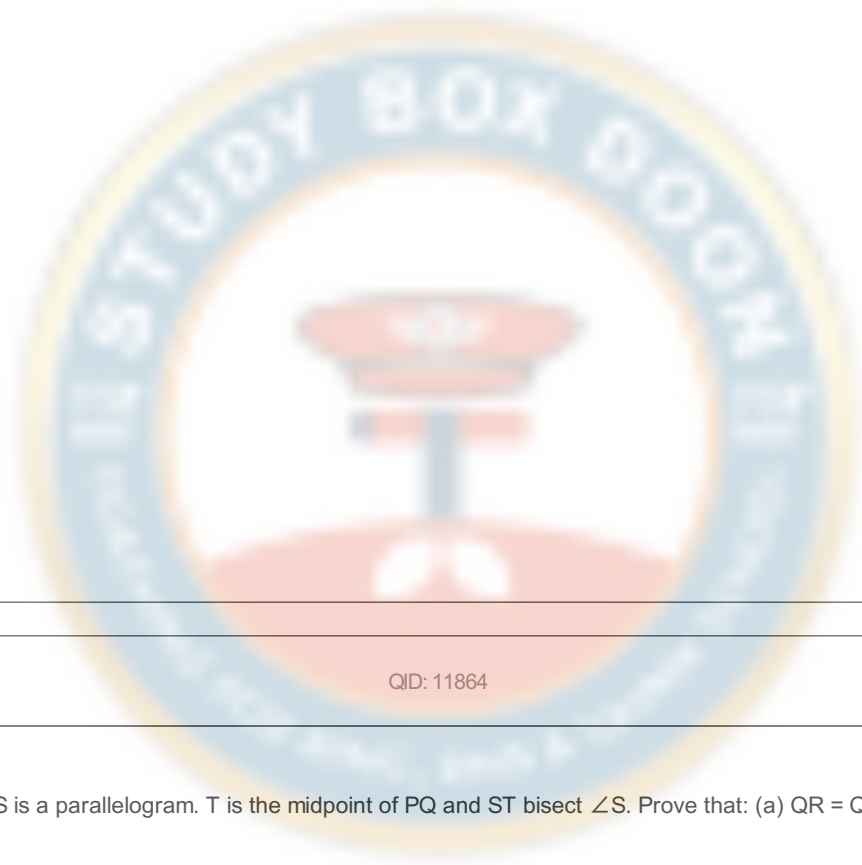
A bicycle dealer has RS 20,000 to invest, when a bicycle is available for Rs 800. If the price of a bicycle increases by 25%, find the number of cycles he can purchase with the same sum.

Please write your answer below.

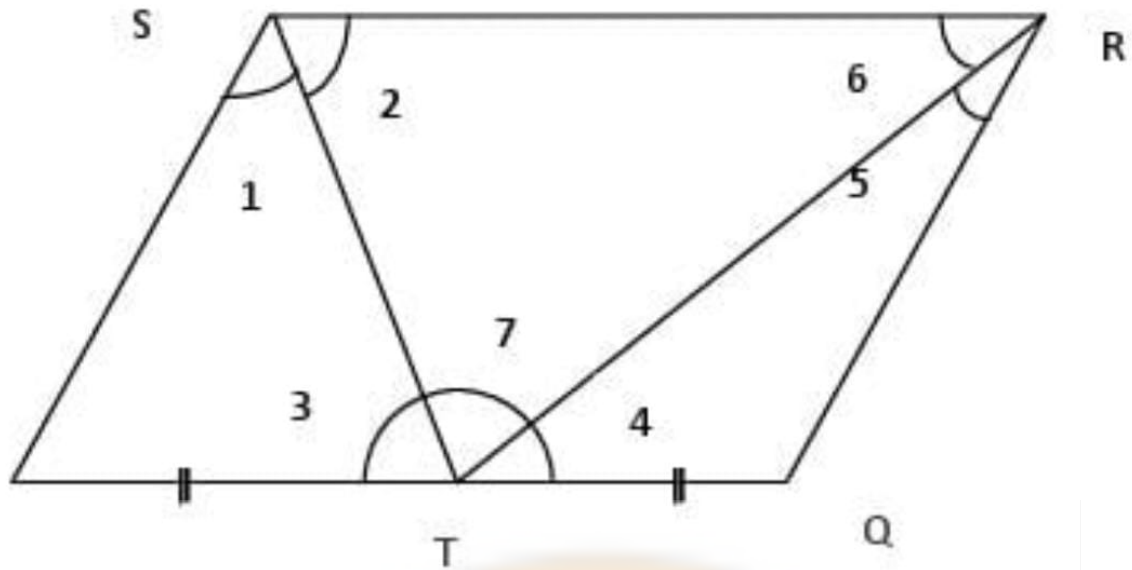


Construct a trapezium PQRS in which $PQ \parallel RS$, $PQ=8\text{cm}$, $QR=6\text{cm}$, $RS=4\text{cm}$, $\angle Q=60^\circ$.

Please write your answer below.



In the above figure PQRS is a parallelogram. T is the midpoint of PQ and ST bisect $\angle S$. Prove that: (a) $QR = QT$ (b) RT bisects $\angle R$ (c) $\angle STR = 90^\circ$



Please write your answer below.



Three sets of English, mathematics and science books, containing 336, 240 and 96 books respectively have to be stacked in such a way that all the books are stored subject wise and height of each stack is the same. How many stacks will be there?

Please write your answer below.



If two unbiased dice are thrown what is the probability of getting a sum of 5?

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Please write your answer below.



— END OF QUESTION PAPER —

Answer Key

No	Question Type	QID	Correct Answer
Question - 1	Essay (Evaluted by Admin)	11837	Essay Type Question
Question - 2	Essay (Evaluted by Admin)	11838	Essay Type Question
Question - 3	Essay (Evaluted by Admin)	11839	Essay Type Question
Question - 4	Essay (Evaluted by Admin)	11840	Essay Type Question
Question - 5	Essay (Evaluted by Admin)	11841	Essay Type Question
Question - 6	Essay (Evaluted by Admin)	11842	Essay Type Question
Question - 7	Essay (Evaluted by Admin)	11843	Essay Type Question
Question - 8	Essay (Evaluted by Admin)	11844	Essay Type Question
Question - 9	Essay (Evaluted by Admin)	11845	Essay Type Question
Question - 10	Essay (Evaluted by Admin)	11846	Essay Type Question
Question - 11	Essay (Evaluted by Admin)	11847	Essay Type Question
Question - 12	Essay (Evaluted by Admin)	11848	Essay Type Question
Question - 13	Essay (Evaluted by Admin)	11849	Essay Type Question
Question - 14	Essay (Evaluted by Admin)	11850	Essay Type Question
Question - 15	Essay (Evaluted by Admin)	11851	Essay Type Question
Question - 16	Essay (Evaluted by Admin)	11852	Essay Type Question
Question - 17	Essay (Evaluted by Admin)	11853	Essay Type Question
Question - 18	Essay (Evaluted by Admin)	11854	Essay Type Question
Question - 19	Essay (Evaluted by Admin)	11855	Essay Type Question
Question - 20	Essay (Evaluted by Admin)	11856	Essay Type Question
Question - 21	Essay (Evaluted by Admin)	11857	Essay Type Question
Question - 22	Essay (Evaluted by Admin)	11858	Essay Type Question
Question - 23	Essay (Evaluted by Admin)	11859	Essay Type Question
Question - 24	Essay (Evaluted by Admin)	11860	Essay Type Question
Question - 25	Essay (Evaluted by Admin)	11861	Essay Type Question
Question - 26	Essay (Evaluted by Admin)	11862	Essay Type Question
Question - 27	Essay (Evaluted by Admin)	11863	Essay Type Question
Question - 28	Essay (Evaluted by Admin)	11864	Essay Type Question
Question - 29	Essay (Evaluted by Admin)	11865	Essay Type Question
Question - 30	Essay (Evaluted by Admin)	11866	Essay Type Question

--- END OF ANSWER KEY ---