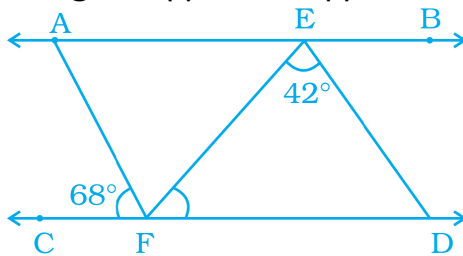


Q1. The foot of a ladder is 6m away from its wall and its top reaches a window 8m above the ground, Find the length of the ladder. 3 Marks

Q2. Simplify: $\frac{3^5 \times 10^5 \times 25}{5^7 \times 6^3}$ 3 Marks

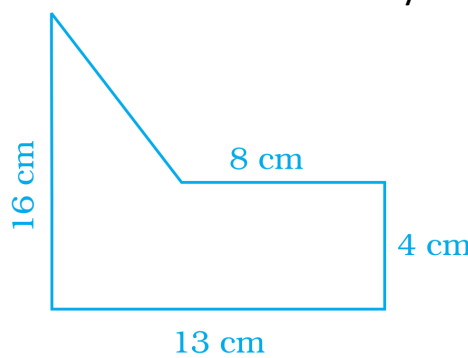
Q3. 9 added to twice a number gives 13. Find the number. 3 Marks

Q4. In Fig. AB || CD, AF || ED, $\angle AFC = 68^\circ$ and $\angle FED = 42^\circ$. Find $\angle FED = 42^\circ$. 3 Marks

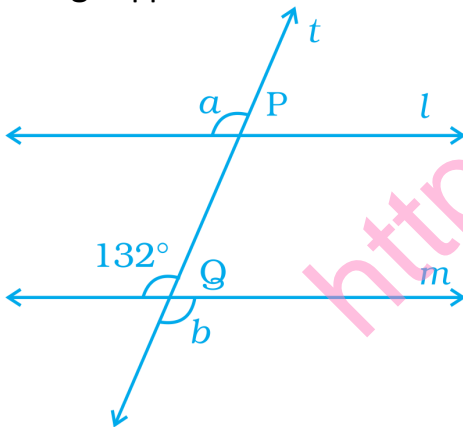


Q5. What should be subtracted from $2x^3 - 3x^2y + 2xy^2 + 3y^3$ to get $x^3 - 2x^2y + 3xy^2 + 4y^3$? 3 Marks

Q6. Find the area enclosed by the following figure: 3 Marks



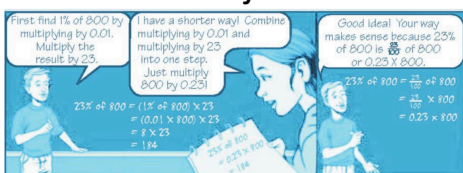
Q7. In Fig. l || m and a line t intersects these lines at P and Q, respectively. Find the sum $2a + b$. 3 Marks



Q8. Find the amount to be paid at the end of 3 years in case: Principal = Rs. 1,200 at 12% p.a. 3 Marks

Q9. A multistorey building has 25 floors above the ground level each of height 5m. It also has 3 floors in the basement each of height 5m. A lift in building moves at a rate of 1m/s. If a man starts from 50m above the ground, how long will it take him to reach at 2nd floor of basement? 3 Marks

Q10. Sachin and Sanjana are calculating 23% of 800. 3 Marks

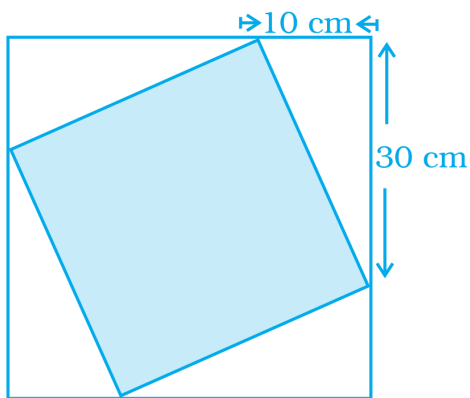


Now, calculate 52% of 700 using both the ways described above. Which way do you find easier?

Q11. Evaluate: $\frac{15^4 \times 18^3}{3^3 \times 5^2 \times 12^2}$ 3 Marks

Q12. Simplify: $\frac{13}{11} \times \frac{-14}{5} + \frac{13}{11} \times \frac{-7}{5} + \frac{-13}{11} \times \frac{34}{5}$ 3 Marks

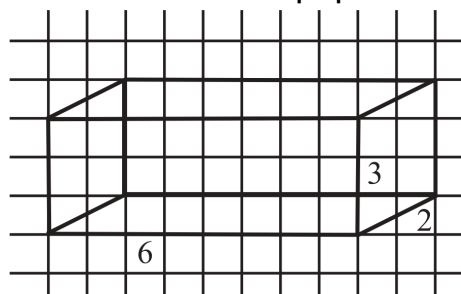
Q13. A design is made up of four congruent right triangles as shown in Fig. Find the area of the shaded portion. 3 Marks



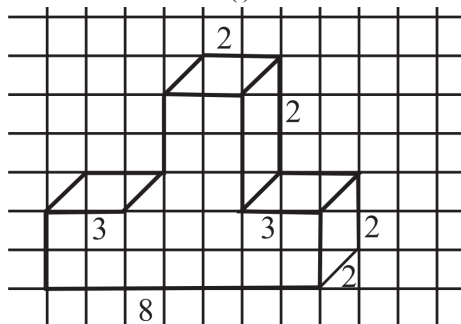
Q14.In a class of 60 students, the number of girls is one third the number of boys. Find the number of girls and boys in the class. **3 Marks**

Q15.After 20 years, Manoj will be 5 times as old as he is now. Find his present age. **3 Marks**

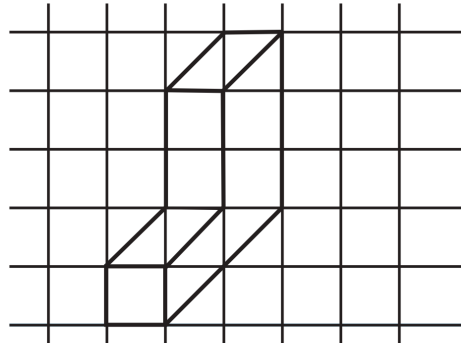
Q16.Use isometric dot paper and make an isometric sketch for each one of the given shapes: **3 Marks**



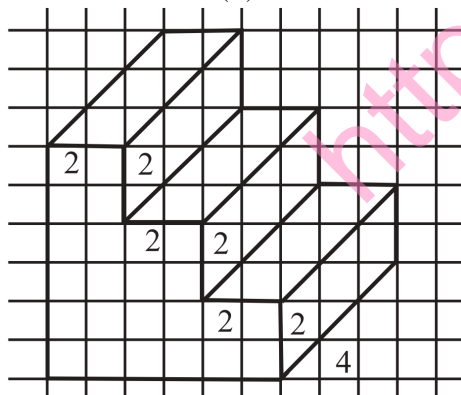
(i)



(ii)

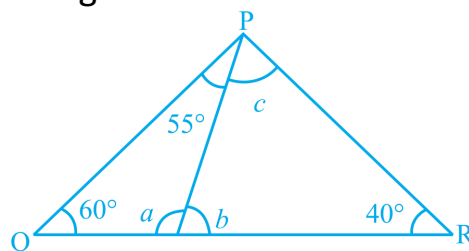


(iii)



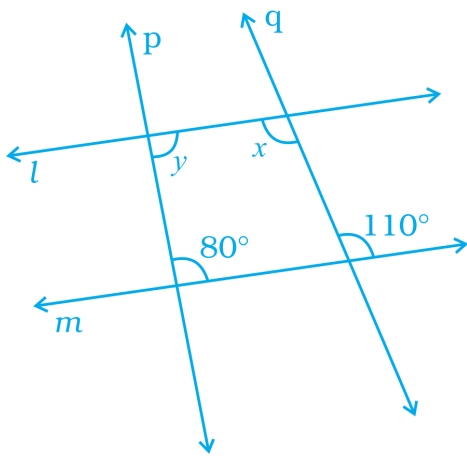
(iv)

Q17.In Figure. find the values of a, b and c. **3 Marks**



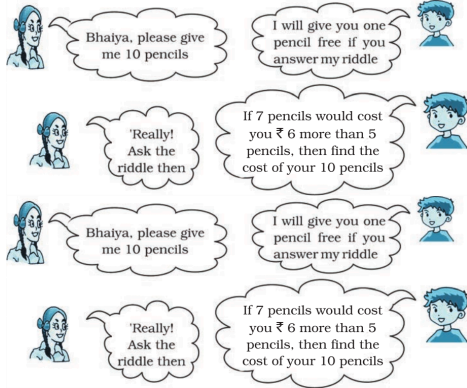
Q18.Chalk contains 10% calcium, 3% carbon and 12% oxygen. Find the amount of carbon and calcium (in grams) in $2\frac{1}{2}$ kg of chalk. **3 Marks**

Q19.In Fig. two parallel lines l and m are cut by two transversals p and q. Determine the values of x and y. **3 Marks**



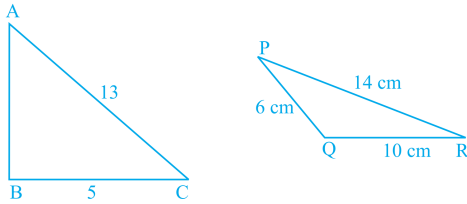
Q20. Look at this riddle? **3 Marks**

If she answers the riddle correctly how ever will she pay for the pencils?

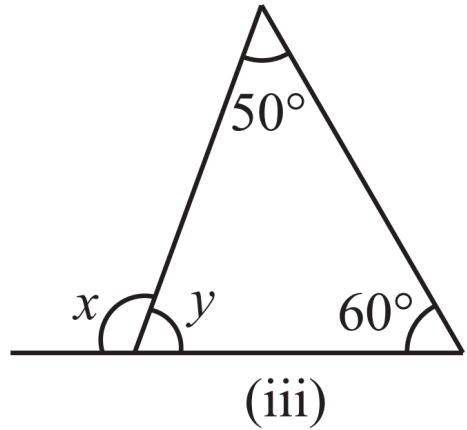


Q21. Two complementary angles differ by 20° . Find the angles. **3 Marks**

Q22. In the given triangles of Fig. perimeter of $\triangle ABC$ = perimeter of $\triangle PQR$. Find the area of $\triangle ABC$. **3 Marks**



Q23. Find the values of the unknowns x and y in the following diagrams: **3 Marks**



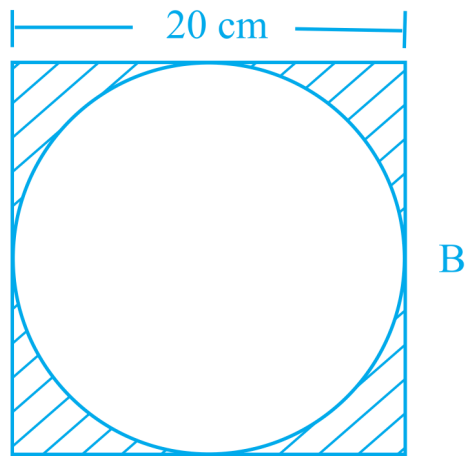
Q24. Write a pair of integers whose product is -12 and there lies seven integers between them (excluding the given integers). **3 Marks**

Q25. By selling a chair for Rs. 1440, a shopkeeper loses 10%. At what price, did he buy it? **3 Marks**

Q26. Amina buys a book for Rs. 275 and sells it at a loss of 15%. How much does she sell it for? **3 Marks**

Q27. A square tile of length 20cm has four quarter circles at each corner as shown in Fig. **3 Marks**

If the circle touches all the four sides of the square tile, find the area of the shaded portion. In which tile, area of shaded portion will be more? (Take $\pi = 3.14$)



Q28. In a family, the consumption of wheat is 4 times that of rice. The total consumption of the two cereals is 80kg. Find the quantities of rice and wheat consumed in the family. **3 Marks**

Q29. Evaluate: **3 Marks**

$$\frac{6^4 \times 12^3 \times 36}{2^5 \times 36}$$

Q30. If a transversal intersects two parallel lines, and the difference of two interior angles on the same side of a transversal is 20° , find the angles. **3 Marks**

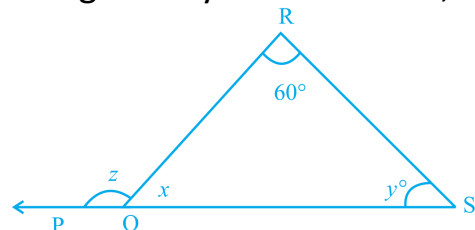
Q31. How many times of 30 must be added together to get a sum equal to 30^7 ? **3 Marks**

Q32. The mean of three numbers is 10. The mean of other four numbers is 12. Find the mean of all the numbers. **3 Marks**

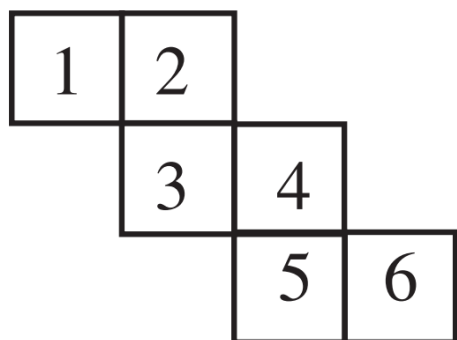
Q33. Height of a pole is 8 m. Find the length of rope tied with its top from a point on the ground at a distance of 6 m from its bottom. **3 Marks**

Q34. Ambika got 99% marks in Mathematics, 76% marks in Hindi, 61% in English, 84% in Science and 95% in Social Science. If each subject carries 100 marks, then find the percentage of marks obtained by Ambika in the aggregate of all the subjects. **3 Marks**

Q35. In Figure. if y is five times x , find the value of z . **3 Marks**

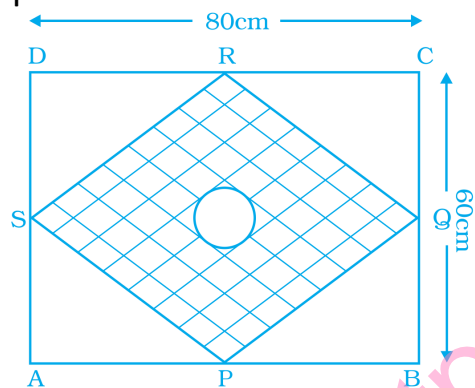


Q36. Can this be a net for a die? **3 Marks**

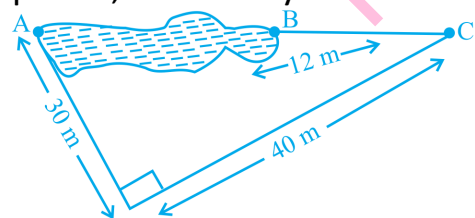


Explain your answer.

Q37. ABCD is a given rectangle with length as 80cm and breadth as 60cm. P, Q, R, S are the mid points of sides AB, BC, CD, DA respectively. A circular rangoli of radius 10cm is drawn at the centre as shown in Fig. Find the area of shaded portion. **3 Marks**



Q38. Points A and B are on the opposite edges of a pond as shown in Figure. To find the distance between the two points, the surveyor makes a right-angled triangle as shown. Find the distance AB. **3 Marks**



Q39. A man travelled 60km by car and 240km by train. Find what per cent of total journey did he travel by car and what per cent by train? **3 Marks**

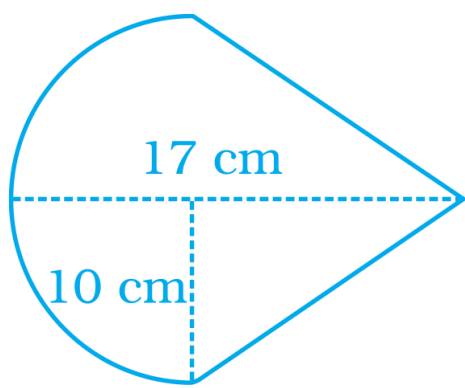
Q40. Find m so that $\left(\frac{2}{9}\right)^3 \times \left(\frac{2}{9}\right)^6 = \left(\frac{2}{9}\right)^{2m-1}$ **3 Marks**

Q41. The simple interest on a certain sum for 2.5 year at 12% per annum is Rs. 300 less than the simple interest on the same sum for 4.5 year at 8% per annum. Find the sum. **3 Marks**

Q42. Evaluate: **3 Marks**

$$\frac{7^8 a^{10} b^7 c^{12}}{7^6 a^8 b^4 c^{12}}$$

Q43. Find the area enclosed by the following figure: **3 Marks**

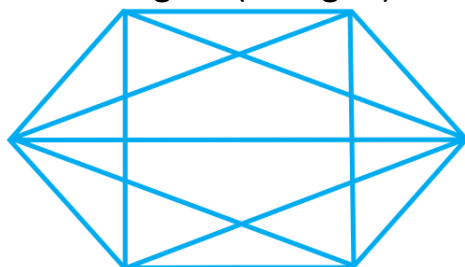


Q44.How much cloth will be used in making 6 shirts, if each required $2\frac{1}{4}$ m of cloth, allowing $\frac{1}{8}$ m for waste in cutting and finishing in each shirt? **3 Marks**

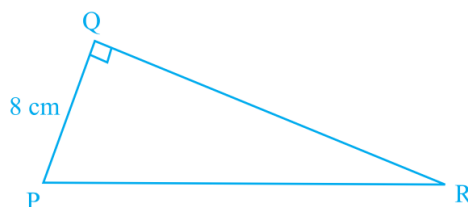
Q45.An elevator descends into a mine shaft at the rate of 6 m/min. If the descent starts from 10 m above the ground level, how long will it take to reach -350 m. **3 Marks**

Q46.Geometry Application: **3 Marks**

The number of diagonals of an n-sided figure is $\frac{1}{2}(n^2 - 3n)$ Use the formula to find the number of diagonals for a 6-sided figure (hexagon).



Q47.Area of a triangle PQR right-angled at Q is 60cm^2 If the smallest side is 8cm long, find the length of the other two sides. **3 Marks**



Q48.In an entertainment programme, 250 tickets of Rs. 400 and 500 tickets of Rs 100 were sold. If the entertainment tax is 40% on ticket of Rs. 400 and 20% on ticket of Rs. 100, then find how much entertainment tax was collected from the **3 Marks**

Q49.Simplify: **3 Marks**

$$\frac{6}{5} \times \frac{3}{7} - \frac{1}{5} \times \frac{3}{7}$$

Q50.Thrice a number decreased by 5 exceeds twice the number by 1. Find the number. **3 Marks**

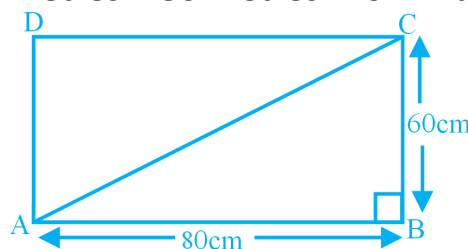
Q51.In a school, the number of girls is 50 more than the number of boys. The total number of students is 1070. Find the number of girls. **3 Marks**

Q52.Calculate the mean, median and mode of the following data: **3 Marks**

5, 10, 10, 12, 13

Are these three equal?

Q53.Jayanti takes shortest route to her home by walking diagonally across a rectangular park. The park measures 60 metres \times 80 metres. How much shorter is the route across the park than the route around its edges? **3 Marks**



Q54.The length of a rectangle is two times its width. The perimeter of the rectangle is 180cm. Find the dimensions of the rectangle. **3 Marks**

Q55.Solve the following: **3 Marks**

People of sundargram planted trees in the village garden. Some of the trees were fruit tress. The number of non-fruit trees. were two more than three times the number of fruit trees. what was the number of tress planted if the number of non -fruit trees planted was 77?

Q56.Arjun bought a rectangular plot with length x and breadth y and then sold a triangular part of it whose base is y and height is z. Find the area of the remaining part of the plot. **3 Marks**

Q57.Set up equations and solve them to find the unknown numbers in the following cases: **3 Marks**

Ibenhal thinks of a number. If she adds 19 to it and divides the sum by 5, she will get 8.

- Q58.**The weight of an object on moon is $\frac{1}{6}$ its weight on Earth. If an object weighs $5\frac{3}{5}$ kg on Earth, how much would it weigh on the moon?

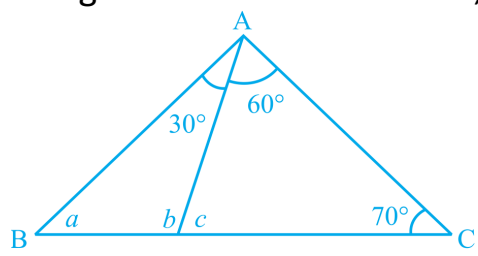
Q59.The cost of a flower vase got increased by 12%. If the current cost is Rs. 896, what was its original cost?

Q60.In Figure. find the values of a, b and c.

3 Marks

3 Marks

3 Marks



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