

Sri Jayawardhanapura Zone

2nd Term Test - 2016

Grade 10

Mathematics I

Time – 2 hours

Part A

✓ Answer all the questions on this paper itself.

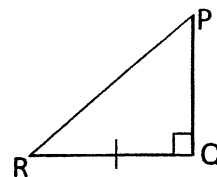
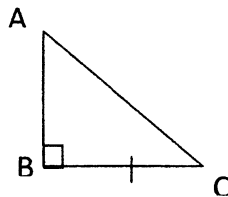
01. Simplify 2.5×3.4

02. How many packets of weight 200g can be made using 2kg of chilie powder.

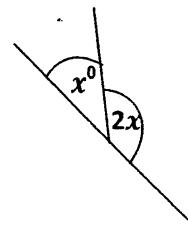
03. Express 1850ml in terms of liters.

04. Solve. $5x - 3 = 7$

05. Write the other requirement for the triangles to be congruent under the case SAS.



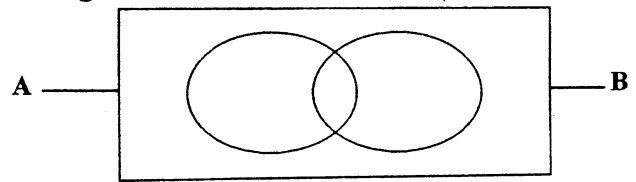
06. Find the value of x .



07. How much is $\frac{1}{8}$ of Rs. 2400?

08. Find the value of $a^2 - b$ when $a = -2$ and $b = 5$

09. Shade the region $(A \cup B)'$ in this Venn diagram.



10. Simplify. $\frac{2}{3} + \frac{3}{4} - \frac{1}{6}$

11.

- Express 216 as a power of 6.
- Hence find the value of $\log_6 216$.

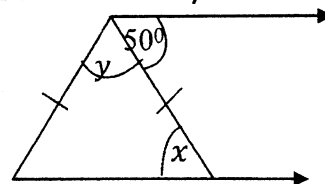
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12. Write 2 conditions to be satisfied by a quadrilateral to be a parallelogram. .

13. Factorise. $x^2 + 7x + 12$

14. Simplify. $\frac{x}{2} + \frac{x}{3}$

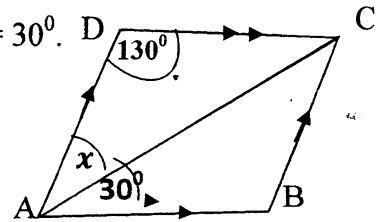
15. According to the data given in the diagram find x and y .



16. Six men take twelve days to complete a certain task. How many days will it take for eight men to complete the same task?

17. If $n(A) = 5$, $n(B) = 6$ and $n(A \cap B) = 3$, Find $n(A \cup B)$

18. In ABCD parallelogram $\widehat{ADC} = 130^\circ$, $\widehat{BAC} = 30^\circ$.
Find the value of x



19. Factorise $9x^2 - 1$

20. Change the subject of $V = U + ft$ to 't'

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21. An amount of Rs. 1400 is divided among Nimal and Vimal in the ratio of 3:4.
Find the amount Nimal gets?

22. Find the circumference of a circle with radius 21cm.

23. Find the gradient and the intercept of the straight line represented by
 $2y = 2x - 5$

24. Simplify . $\frac{x^{-5} \times y^{10}}{x^{-8} \times y^7}$

25. Find the least common multiple of $4x^2$, $6x^2 y$

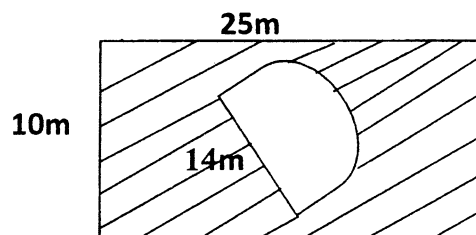
Part B

✓ Answer all questions.

01. Kamal spends $\frac{3}{5}$ of the amount he has on food, $\frac{1}{4}$ on clothing and the balance of Rs. 1200 is deposited in his bank account.
- What is the total fraction of money spent on food and clothing?
 - How much money did he have?
 - Find the amount spent on food.
 - Find the amount spent on clothing.

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02. As shown in the diagram there is a semicircular shaped flower bed in the rectangular shaped piece of land. The diameter of the flower bed is 14m. Grass is grown in the remaining part of the land.



- Find the perimeter of the flower bed.
- Find the area of the flower bed.
- Find the area of the rectangular shaped land.
- Hence find the area of land in which grass is grown.

03. According to the Venn diagram.

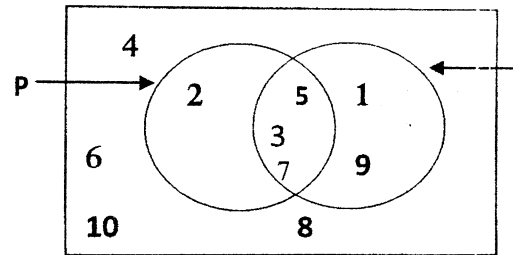
i. Write the elements of P

ii. Write the elements of Q

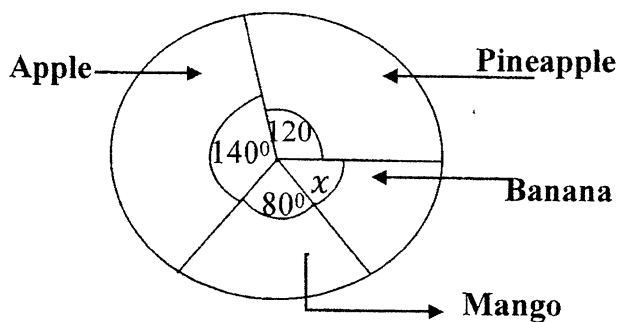
iii. Write the elements of $P \cap Q$.

iv. What is the value of $n(P \cap Q)$

v. Shade the region $(P \cap Q)'$ in the diagram.



04. Following pie chart represents data collected on the most favorite fruit of a set of students. Answer the questions given below using the pie chart provided.



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i. Find the angle of the sector which represents the student who like to eat banana?

ii. If the number of student who like to eat bananas is 40, find the total numbers of students represents in the pie chart.

iii. How many students like to eat apple?

iv. How many students like to eat pineapple more than mango?

05. Food had been stored which is sufficient for 20 students of a training camp for 15 days. After 5 days another 5 students joined with the training camp.

i. Find the amount of food that is sufficient for 20 students for 15 days.

ii. Find the amount of food consumed by 20 students in 5 days.

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iii. What is the amount of food remaining after 5 days.

iv. For how many days the remaining food is sufficient