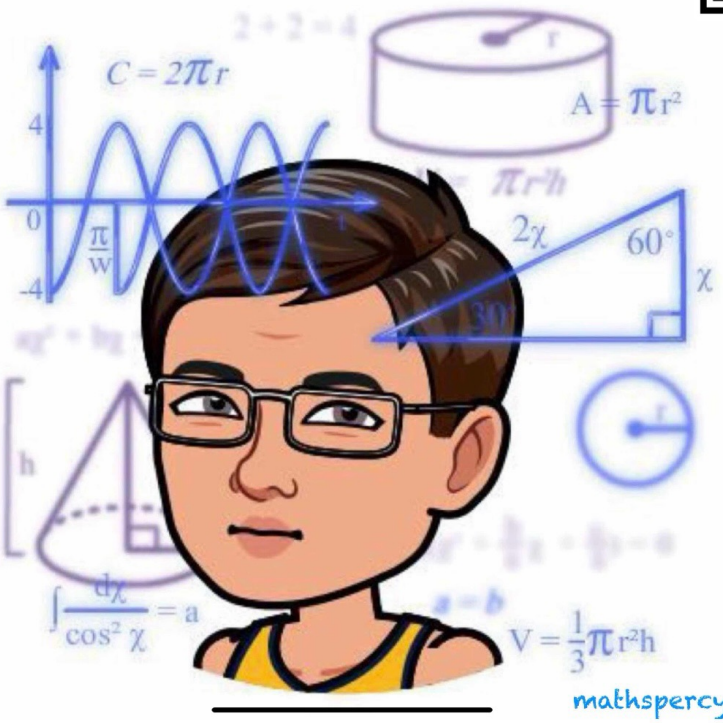
Term 1 Assessment 2025 – 2026
Revision Exercsie (Set 1)

Grade :	G9	Name :	
Subject :	Mathematics	Class :	( )
Paper :	I	Group No. :	
Date :		Marks :	/ 72
Time Allowed :	1 hour 15 minutes	Parent's Signature :	

This paper must be answered in English

INSTRUCTIONS

1. This paper consists
   28 marks.
2. Answer all the ques
3. Use of an HKEAA a
4. The diagrams in this
5. Write your mathema
   provided. There is
   NO need to show th
6. Unless otherwise sp
   significant figures.
7. Do your rough work



Section A (44 marks)

1. (a) Factorize the following expressions.

(i) $2x^2 - 9x + 9$ (1 mark)

(ii) $6x^2 + 23x - 48$ (1 mark)

(b) Hence, Mr. Ho claims that $x+2$ is a factor of $2x^3 - 15x^2 - 14x + 48$. Do you agree? Explain your answer. (4 marks)

2. Last year, the number of staff members in a company was 12 000, where 45% were male. This year, the number of male staff members increases by 15% and the number of female staff members decreases by 10%. Find

(a) the present number of staff members in the company, (2 marks)

(b) the percentage change in the number of staff members this year. (2 marks)

3. The number of members in the Mathematics club this year is 20% more than last year, while the number of members last year was 25% less than two years ago. If there are 108 members in the Mathematics club this year, find the number of members in the Mathematics club two years ago. (4 marks)

4. Find the value of $2\sin 30° \cos 45° \tan 60°$ without using a calculator. (3 marks)

5. Let θ be an acute angle. Given that $\cos\theta = 0.8$, find the value of $4\sin\theta - 5\tan\theta$ without finding the value of θ. (4 marks)

6. The following table shows the number of goals of 40 football players last year.

No. of goals	1 – 5	6 – 10	11 – 15	16 – 20	21 – 25	26 – 30	31 – 35	36 – 40
Class Mark								
No. of players	2	x	9	4	7	x	6	8

(a) Complete the above table. (1 mark)

(b) (i) Find x. (1 mark)

(ii) Write down the modal class of the number of goals of these 40 players last year. (1 mark)

(iii) Find the mean number of goals of these 40 players last year. (2 marks)

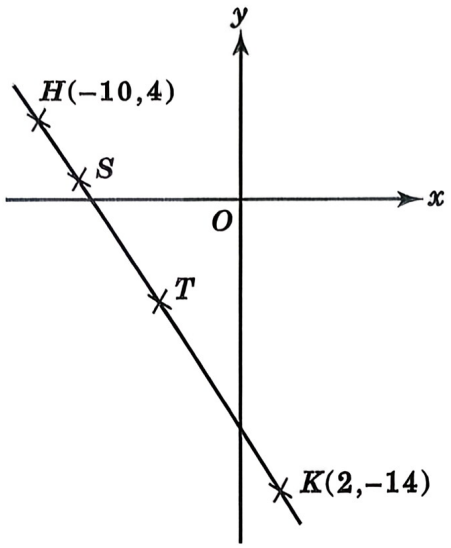
7. The ages of 6 employees in a department are 25, 36, 48, 19, 25 and y respectively. Given that the mean age of the employees is 33.5.

(a) Find the value of y. (2 marks)

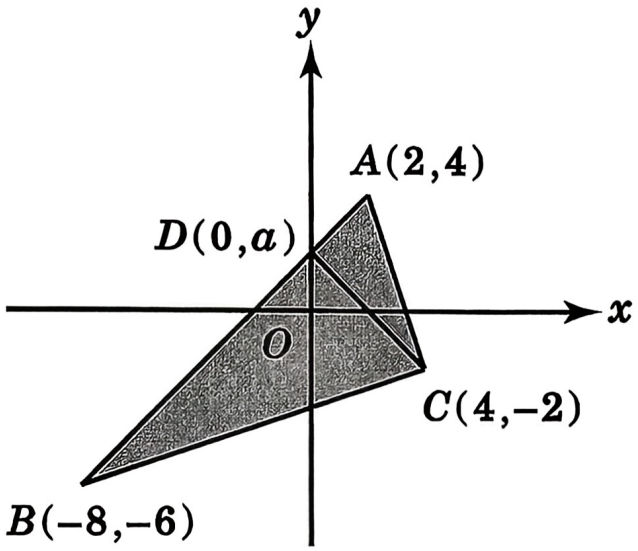
(b) Find the median age of the employees. (1 mark)

(c) Among the 6 employees, if the youngest employee resigns after 2 years, find the new mean age of the remaining 5 employees at that time. (2 marks)

8. In the figure, the coordinates of two points H and K are $(-10\ ,\ 4)$ and $(2\ ,\ -14)$ respectively. S and T are two points on the line segment HK. If $HS : ST : TK = 1 : 2 : 3$, find the coordinates of S and T. (5 marks)



9. In the figure, the coordinates of A and B are (2 , 4) and (–8 , –6) respectively. AB cuts the y-axis at $D(0 , a)$ and the coordinates of C are (4 , –2).



(a) Find the value of a. (3 marks)

(b) Prove that $CD \perp AB$. (2 marks)

(c) Find the area of ΔABC. (3 marks)

Section B (28 marks)

10. Peter has \$100 000. The amount of money Wesley has is 27% less than that of Peter.

(a) How much does Wesley have? (2 marks)

(b) Wesley deposits his amount of money in Wealthy Bank at a simple interest rate of r%. After 2 years, he receives a simple interest of \$6570. Find the value of r. (2 marks)

(c) If Wesley withdraws the amount from Wealthy Bank and deposits it in Fortune Bank at the same interest rate per annum for 3 years but the interest is compounded every 2 months, find the total interest obtained in these 5 years, correct to the nearest dollar. (3 marks)

11. The following table shows the number of votes for Candy and Tommy in the Head Prefect election.

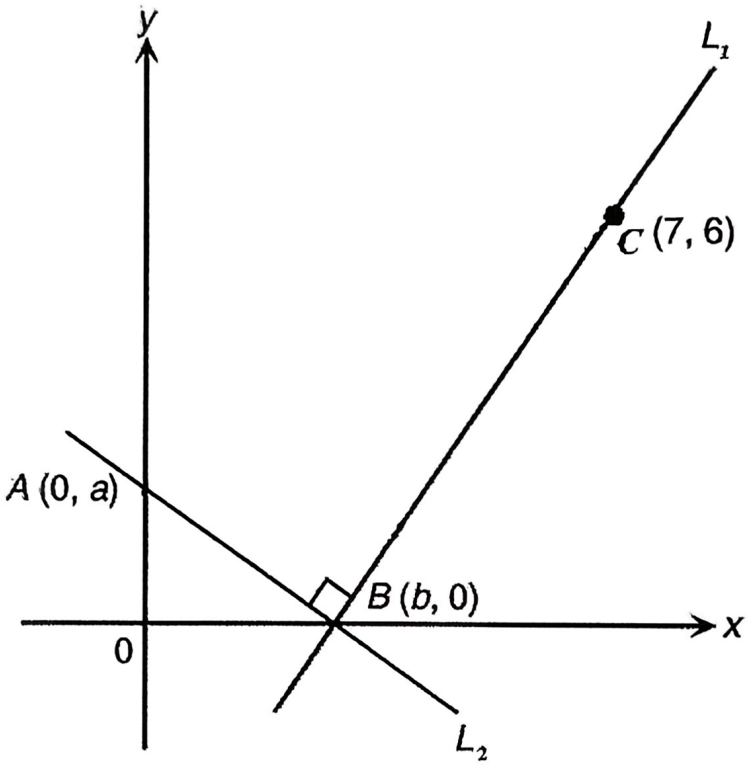
	Junior forms	Senior forms	Teachers
Weight	1	2	y
Candy	220	x	23
Tommy	200	$558-x$	21

(a) If the weighted mean of the number of votes for Candy and Tommy are 137.5 and 140.5 respectively, find the values of x and y. (5 marks)

(b) The junior forms students said it is unfair that the weights of the votes of junior and senior forms are different. If the weight of both the junior forms and senior forms is 2 while the weight of teachers' votes remains unchanged, will the election result be changed? Explain your answer. (3 marks)

(c) If the weights of junior and senior forms remain unchanged as 1 and 2 respectively, can you suggest a minimum integral weight of teachers' vote such that Candy can be the Head Prefect? Show your workings. (2 marks)

12. In the figure, L_1 and L_2 are straight lines, where $L_1 \perp L_2$. L_2 cuts the y-axis and x-axis at $A(0, a)$ and $B(b, 0)$ respectively, and $OA : OB = 2 : 3$. It is given that $C(7, 6)$ is a point on L_1.



(a) Find the coordinates of A and B. (5 marks)

(b) Let $D(2, 5)$. Show that $DA // BC$. (2 marks)

(c) Let P be a point on the line segment AB such that the area of ΔCPD is the greatest.

(i) Write down the coordinate of P. (1 mark)

(ii) Hence, find the greatest possible area of ΔCPD. (3 marks)

END OF PAPER