Term 1 Assessment 2025 – 2026

Revision Exercise (Set 2)

Grade:	G9	Name:	
Subject:	Mathematics	Class:	( )
Paper:	II	Group No.:	
Date:		Marks:	/ 30
Time Allowed:	50 minutes		

INSTRUCTIONS

(1) There are 30 questions in the paper. You should check that all the questions are there. Look for the words '**END OF PAPER**' after the last question.

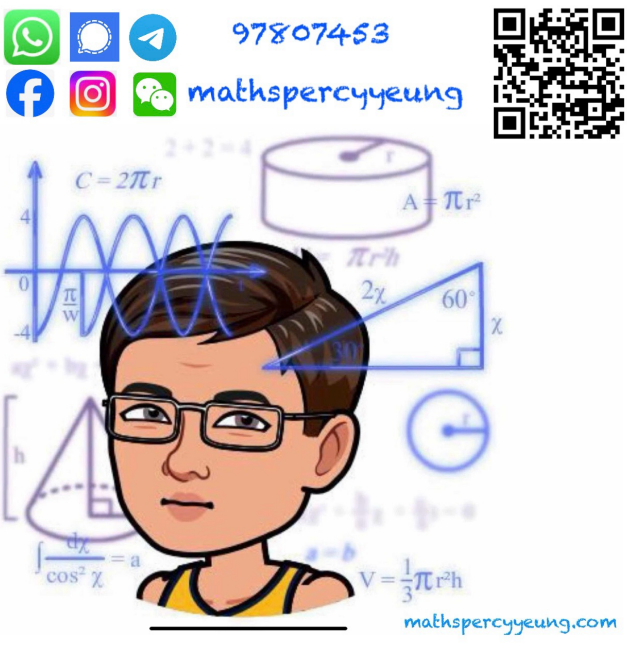
(2) Each question carries 1 mark.

(3) **ANSWER ALL QUESTIONS**. You are advised to use an HB pencil to mark all the answers on the MC Answer Sheet, so that wrong marks can be completely erased with a clean rubber.

(4) You should mark only **ONE** answer for each question. If you mark more than one answer, you will receive **NO MARK** for that question.

(5) No mark will be deducted for the wrong answers.

(6) Use of an HKEAA approved calculator is allowed.



The diagrams in this paper are not necessarily drawn to scale.

Choose the best answer for each question.

1. Which of the following expressions have $2x - 5$ as a factor?

   I. $2x^2 + x - 15$

   II. $4x^2 + 25$

   III. $4x^2 - 16x + 15$

   A. I and II only

   B. I and III only

   C. II and III only

   D. I, II and III

2. Factorize $-n^2 - 56 + 15n$.

   A. $-(n - 7)(n - 8)$

   B. $-(n - 4)(n - 14)$

   C. $(n + 4)(n - 14)$

   D. $(n + 7)(n - 8)$

3. Factorize $6x^2 - 7x - 3$.

   A. $(6x - 1)(x + 3)$

   B. $(6x + 1)(x - 3)$

   C. $(3x - 1)(2x + 3)$

   D. $(3x + 1)(2x - 3)$

4. Factorize $a^2-4a-12+2am+4m$.

   A. $(a-6)(a+2+m)$

   B. $(a-6)(a+2+2m)$

   C. $(a+2)(a-6+m)$

   D. $(a+2)(a-6+2m)$

5. $(y-4)(12-y)-2y=$

   A. $(y+6)(y-8)$.

   B. $(y+6)(8-y)$.

   C. $(y-6)(y-8)$.

   D. $(6-y)(y-8)$.

6. It is given that $x^2+ax+18\equiv(x+m)(x+n)$, where m and n are positive integers. Which of the following is NOT a possible value of a?

   A. 9

   B. 11

   C. 17

   D. 19

7. $P(14, 18)$, $Q(-3, 12)$ and $R(5, 6)$ are the vertices of a right-angled triangle with $\angle R = 90°$. Find the area of $\triangle PQR$.

   A. 75 sq. units

   B. 90 sq. units

   C. 135 sq. units

   D. 150 sq. units

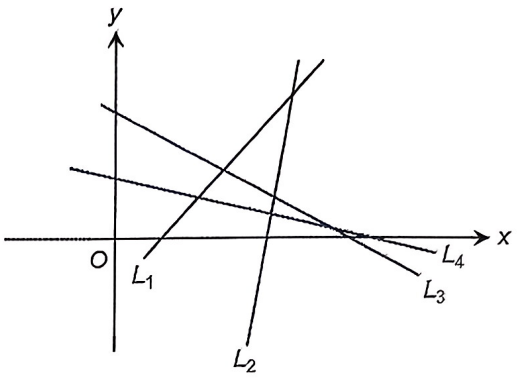
8. In the figure, L_1, L_2, L_3 and L_4 are straight lines. If m_1, m_2, m_3 and m_4 are the slopes of L_1, L_2, L_3 and L_4 respectively, which of the following must be true?

A. $m_2 > m_1 > m_3 > m_4$

B. $m_2 > m_1 > m_4 > m_3$

C. $m_2 > m_3 > m_1 > m_4$

D. $m_4 > m_3 > m_2 > m_1$



9. If the slope and the y-intercept of a straight line L are both equal to 2, then the x-intercept of L is

A. 1.

B. 2.

C. –1.

D. –2.

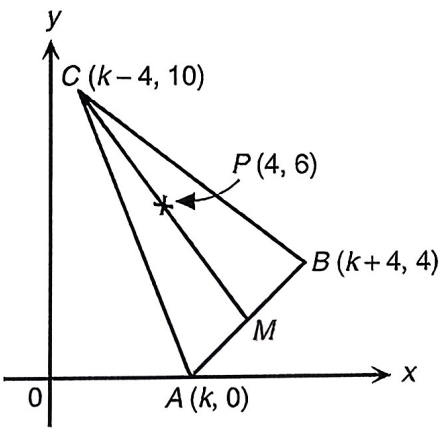
10. In the figure, $A(k, 0)$, $B(k + 4, 4)$ and $C(k - 4, 10)$ are the vertices of a triangle. M is the mid-point of AB. If $P(4, 6)$ divides CM into 2 equal parts, find the value of k.

A. 4.5

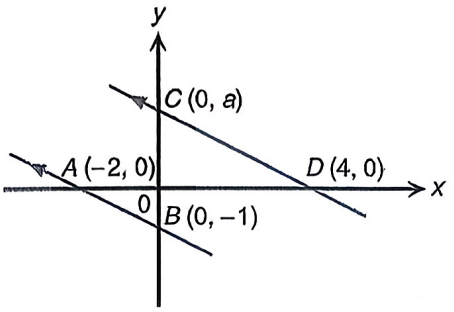
B. 5

C. 5.5

D. 6



11. In the figure, $BA \parallel DC$. Find the value of a.



A. 2

B. 4

C. $\frac{1}{2}$

D. $\frac{1}{4}$

12. It is given that the slope of L_1 is $\frac{1}{3}$ and $AB \perp L_1$, where the coordinates of A and B are (1, 0) and (0, n) respectively. Find the value of n.

A. 3

B. –3

C. $\frac{1}{3}$

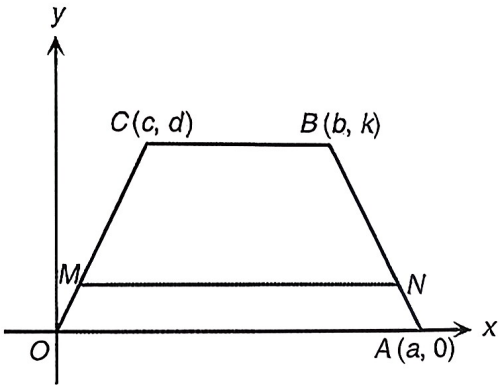
D. $-\frac{1}{3}$

13. In the figure, the origin O, $A(a, 0)$, $B(b, k)$ and $C(c, d)$ are the vertices of a trapezium, where $CB \parallel OA$ and $OC = AB$. M and N are points on OC and AB respectively such that $OM : MC = AN : NB = 1 : 3$. Which of the following must be true?

I. $k = d$

II. $c = a - b$

III. $MN \parallel OA$



A. I and II only

B. I and III only

C. II and III only

D. I, II and III

14. When a number is first increased by 25% and then decreased by r%, it remains unchanged. What is the value of r?

A. 20

B. 25

C. 75

D. 80

15. A pair of jeans costs \$50. Of the cost, 10% is for raw materials, 30% is for wages and 60% is for advertising expense. If both the costs for raw materials and wages are increased by 20%, and the advertising expense is decreased by 30%, find the new cost of the pair of jeans.

A. \$45

B. \$50

C. \$53

D. \$55

16. The volume of water in a funnel is now 70 cm^3. If it decreased at a constant rate of 2% per second, find the volume of water in the funnel 1.5 minutes ago, correct to the nearest mm^3.

A. 72 110 mm^3

B. 72 154 mm^3

C. 416 019 mm^3

D. 431 272 mm^3

17. John borrowed \$70 000 from a bank at a simple interest rate of r% p.a. and repaid an interest of \$4200 after 9 months. Find the value of r.

A. 5

B. 6

C. 7

D. 8

18. Candy deposits \$92 000 in a bank at 8% p.a. compounded half-yearly. Find the compound interest she will receive after 3 years, correct to the nearest integer.

A. \$24 409

B. \$23 893

C. \$22 080

D. \$11 487

19. A sum of money is deposited in a bank at an interest rate of 8% p.a. for 1.5 years. If the interest is changed from being compounded half-yearly to compounded quarterly, the interest received will be \$13 more. Find the principal deposited, correct to 3 significant figures.

A. \$5 000

B. \$10 000

C. \$15 000

D. \$20 000

20. The following table shows the training time of 20 members in a fitness centre last week.

Training time (h)	1 – 5	6 – 10	11 – 15	16 – 20
Number of members	4	8	5	3

Find the mean training time of these members last week.

A. 9 h

B. 9.25 h

C. 9.5 h

D. 9.75 h

21. The following table shows the numbers of plates stored in some cupboards.

Number of plates	5	6	7	8	9
Number of cupboards	7	x	10	4	5

If the median number of plates stored in these cupboards is 6.5, find the value of x.

A. 11

B. 12

C. 13

D. 14

22. Given a set of data x, $x-7$, $x-5$, x and $x+22$, which of the following must be true?

I. The mean is $x+2$.

II. The median is $x-7$.

III. There are no modes in the set of data.

A. I only

B. II only

C. I and III only

D. II and III only

23. Consider the following set of integers.

$$10, 7, 6, 7, 5, 2, x, y, z$$

If the mean and the mode of the above data are 7 and 10 respectively, then their median is

A. 5.

B. 6.

C. 7.

D. 8.

24. The following table shows Vincent's scores in 3 levels of a game.

	Level 1	Level 2	Level 3
Scores	65	73	68
Weight	2	3	m

If the weighted mean score of Vincent in these 3 levels in the game is 69, find the value of m.

A. 2

B. 3

C. 4

D. 5

25. It is given that the mean of the data set p, q, r, s and t is x. Find the mean of the data set $x(x-p)$, $x(x-q)$, $x(x-r)$, $x(x-s)$ and $x(x-t)$.

A. $-x^2$

B. 0

C. x^2

D. x^2-x

26. $\dfrac{\sin 30° \cos 45°}{\tan 60°} =$

A. $\dfrac{1}{\sqrt{6}}$.

B. $\dfrac{1}{2\sqrt{6}}$.

C. $\dfrac{2\sqrt{3}}{5}$.

D. $\dfrac{\sqrt{3}}{2}$.

27. If $\sin\theta = 1 - \cos 60°$, where θ is an acute angle, find the value of $\tan\theta$.

A. $\frac{1}{2}$

B. 1

C. $\frac{\sqrt{3}}{3}$

D. $\sqrt{3}$

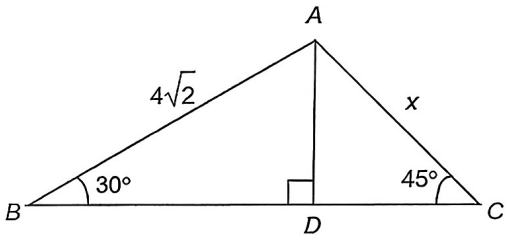
28. In the figure, BDC is a straight line. Find the value of x.

A. $\frac{4\sqrt{6}}{3}$

B. $4\sqrt{2}$

C. 4

D. $4\sqrt{3}$



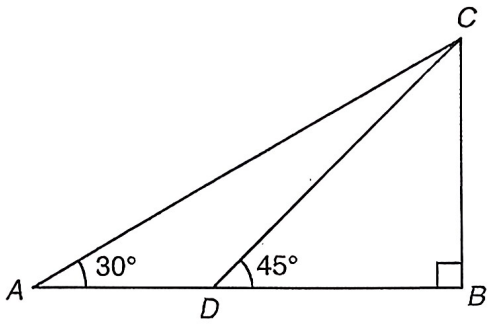
29. In the figure, ADB is a straight line. Find $AD : BD$.

A. $1 : 2$

B. $1 : \sqrt{3}$

C. $(\sqrt{3} - 1) : 1$

D. $(\sqrt{3} - 1) : \sqrt{3}$



30. If θ is an acute angle and $\cos\theta = x$, then $\tan\theta =$

A. $\sqrt{1-x^2}$.

B. $\frac{\sqrt{1-x^2}}{x}$.

C. $\frac{1}{\sqrt{1-x^2}}$.

D. $\frac{x}{\sqrt{1-x^2}}$.

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