Term 2 Assessment 2025 – 2026

Revision Exercise (Set 1)

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

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.

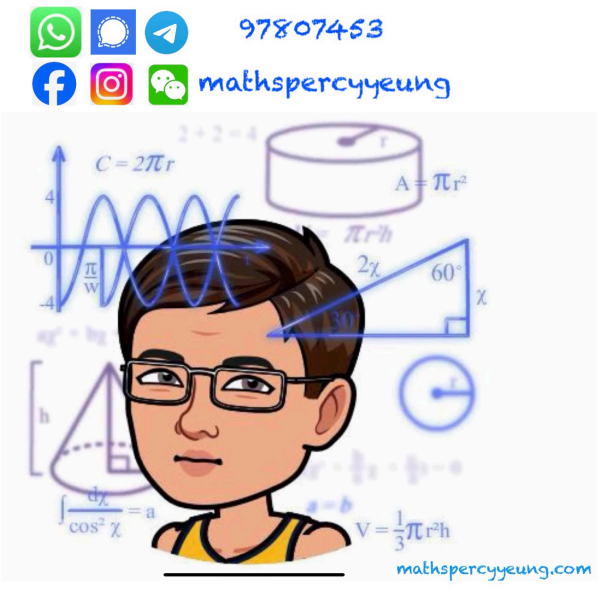
(2) Each question carries 1 mark.

(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. Simplify $r^6 \times \left(-\frac{s^4}{r^5}\right)^2$.

   A. $\frac{s^6}{r}$

   B. $\frac{s^6}{r^{13}}$

   C. $\frac{s^8}{r^4}$

   D. $\frac{s^8}{r^{16}}$

2. If n is an integer, then $\frac{3^{n+2}-3^{n-1}}{3^n+3^{n+1}} =$

   A. $\frac{9}{4}$.

   B. $\frac{11}{3}$.

   C. $\frac{13}{6}$.

   D. $\frac{14}{5}$.

3. Write the denary number $3\times2^8+8\times2^7+3\times2^4-2^4$ as a binary number.

   A. 1101010000_2

   B. 1110010000_2

   C. 11010100000_2

   D. 11100100000_2

4. Factorize $-10k + k^2 + 24$.

   A. $(k-1)(k-24)$

   B. $(k-2)(k-12)$

   C. $(k-3)(k-8)$

   D. $(k-4)(k-6)$

5. Which of the following expressions does not have $x-2$ as a factor?

   A. $x^2 - 5x + 6$

   B. $x^2 + 2x - 8$

   C. $x^2 + 3x - 10$

   D. $x^2 + 8x + 12$

6. If x is an integer that satisfies the inequality $2(x-8) < -23$, then the largest possible value of x is

   A. -3.

   B. -4.

   C. -5.

   D. 9.

7. The adult fare of a mini-bus route is $\$x$ and the child fare is half of the adult fare. If the total fare of 4 adults and 5 children is not less than \$48, which of the following inequalities can be used to find the range of values of x?

A. $4x+5\left(\frac{x}{2}\right)\leq 48$

B. $4x+5\left(\frac{x}{2}\right)\geq 48$

C. $4x+5\left(x-\frac{1}{2}\right)\leq 48$

D. $4x+5\left(x-\frac{1}{2}\right)\geq 48$

8. If $m<n$ and $k<0$, which of the following must be true?

I. $m-k<n-k$

II. $-km<-kn$

III. $\frac{m}{k^2}<\frac{n}{k^2}$

A. I and II only

B. I and III only

C. II and III only

D. I, II and III

9. The price of a yacht is \$800 000 now. If the price increases at a rate of 7% per year for the next 3 years, and then decreases at a rate of 6% per year for each subsequent year, find the overall percentage change in the price of the yacht over the next 8 years.

A. −0.113%

B. −9%

C. −10.1%

D. −89.9%

10. Mr Ho deposits \$150 000 in a bank at an interest rate of 6% p.a. compounded monthly. Find the compound interest he will receive 2 years later, correct to the nearest \$10.

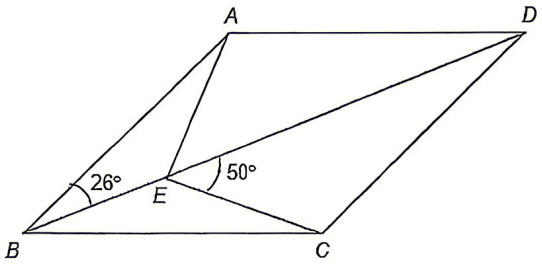
A. \$18 000

B. \$18 540

C. \$18 970

D. \$19 070

11. In the figure, $ABCD$ is a parallelogram. E is a point on BD such that $BE = CE$. If $\angle CED = 50°$, find $\angle ADC$.



A. 51°

B. 52°

C. 53°

D. 54°

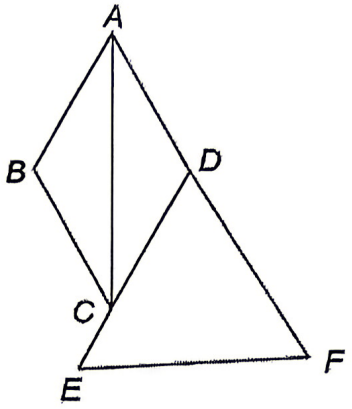
12. In the figure, $ABCD$ is a rhombus. ADF and DCE are straight lines. If $\angle DEF = 64°$ and $DE = EF$, find $\angle CAD$.

A. 29°

B. 30°

C. 31°

D. 32°



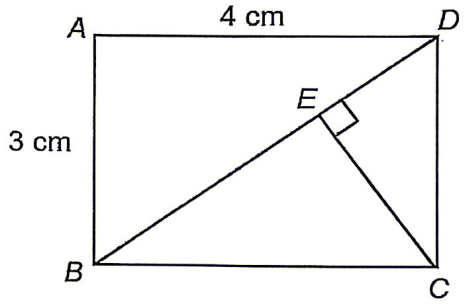
13. In the figure, $ABCD$ is a rectangle. E is a point on BD such that $CE \perp BD$. Find $BE : ED$.

A. 4 : 3

B. 5 : 2

C. 16 : 9

D. 12 : 7



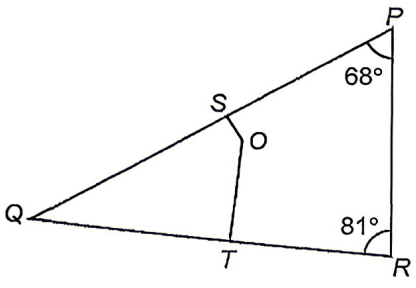
14. In the figure, O is the circumcentre of ΔPQR. S and T are the mid-points of PQ and QR respectively. $\angle PRQ = 81°$ and $\angle QPR = 68°$. Find $\angle SOT$.

A. 129°

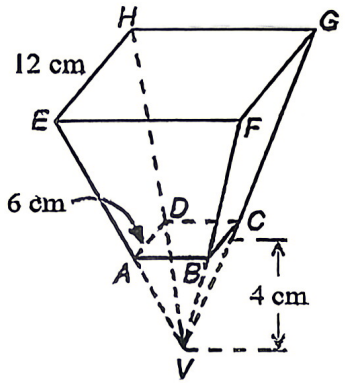
B. 139°

C. 149°

D. 159°



15. The figure shows a solid frustum *ABCDHEFG*. The lower base *ABCD* and the upper base *EFGH* are both squares with $AD = 6$ cm and $EH = 12$ cm. Find the total surface area of the frustum *ABCDHEFG*.



A. $324\ cm^2$

B. $360\ cm^2$

C. $396\ cm^2$

D. $420\ cm^2$

16. It is given that *A*, *B* and *C* are solid spheres. If the volume of *A* : the volume of *B* = 8 : 27 and the surface area of *A* : the surface area of *C* = 49 : 25, then the radius of *B* : the radius of *C* =

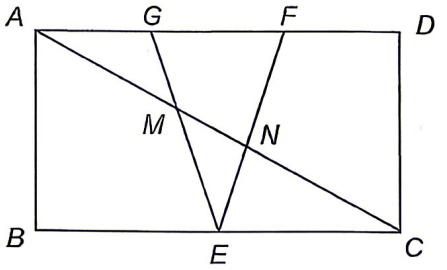
A. 21 : 10.

B. 27 : 25.

C. 189 : 40.

D. 343 : 200.

17. In the figure, *ABCD* is a rectangle. *AMNC* is a straight line. *E* is the mid-point of *BC*. *G* and *F* are the points on *AD* such that $AG = GF = FD$. If the area of ΔCEN is $666\ cm^2$, find the area of the quadrilateral *CDFN*.



A. $1226\ cm^2$

B. $1860\ cm^2$

C. $1924\ cm^2$

D. $2280\ cm^2$

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

A. 3

B. -3

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

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

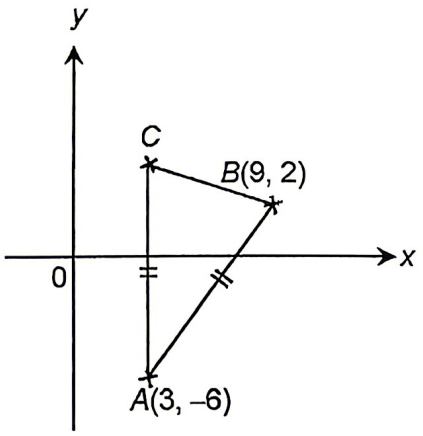
19. The figure shows an isosceles triangle ABC, where $AB = AC$ and C is vertically above A. Find the coordinates of C.

A. $(2, -6)$

B. $(3, 4)$

C. $(3, 6)$

D. $(3, 10)$



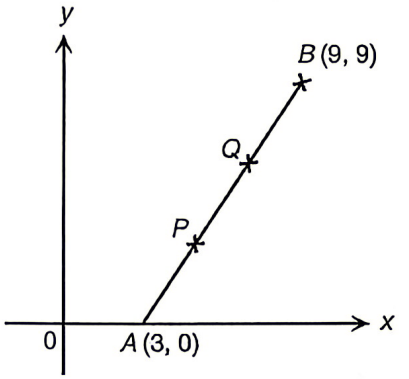
20. In the figure, P and Q divide the line segment joining $A(3, 0)$ and $B(9, 9)$ into 3 equal parts. Find the coordinates of P and Q.

A. $P(4, 2), Q(6, 5)$

B. $P(4, 2), Q(7, 6)$

C. $P(5, 3), Q(6, 5)$

D. $P(5, 3), Q(7, 6)$



21. Given that $\tan\theta = \frac{1}{z}$, where θ is an acute angle, express $\sin\theta - \cos\theta$ in terms of z.

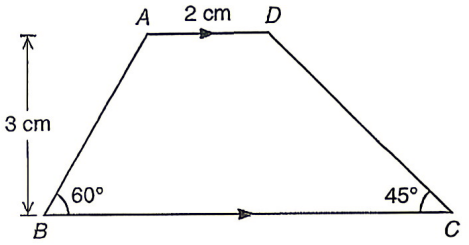
A. $\frac{1-z}{\sqrt{1+z^2}}$

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

C. $\frac{1+z}{\sqrt{1+z^2}}$

D. 0

22. In the figure, $ABCD$ is a trapezium with $AD \,//\, BC$. It is given that $AD = 2$ cm, $\angle ABC = 60°$ and $\angle BCD = 45°$. The height of the trapezium is 3 cm. Find the length of BC.



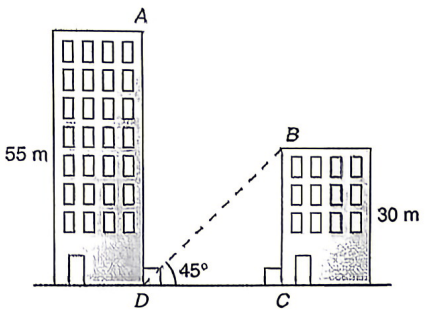
A. $(3+\sqrt{3})$ cm

B. $(5+\sqrt{3})$ cm

C. $3\sqrt{3}$ cm

D. $5\sqrt{3}$ cm

23. The figure shows two buildings AD and BC with heights 55 m and 30 m respectively. The angle of elevation of B from D is 45°. Find the angle of depression of B from A.



A. 30.0°

B. 39.8°

C. 45.0°

D. 50.2°

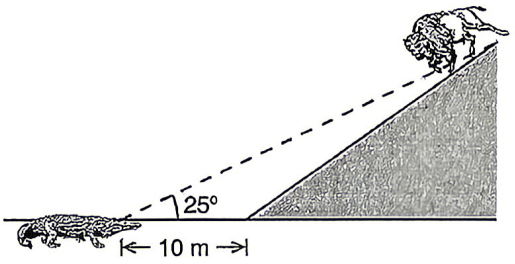
24. In the figure, a crocodile in a river looks at a buffalo standing on a slope. The angle of elevation of the buffalo from the crocodile is 25°. The gradient of the slope is 0.7 and the crocodile is 10 m from the shore. Find the vertical distance between the buffalo and the water level.

A. 14.0 m

B. 15.2 m

C. 16.8 m

D. 18.1 m



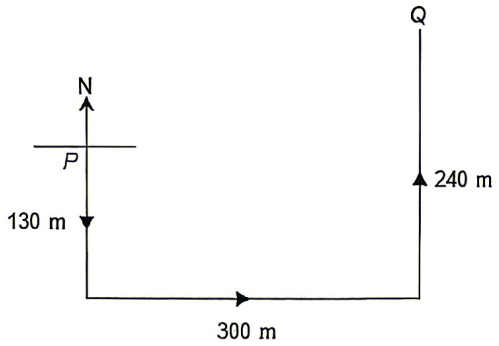
25. Ben starts walking from P for 130 m due south, then 300 m due east and then 240 m due north to Q. Find the compass bearing of Q from P.

A. N20.1°E

B. N69.9°E

C. S20.1°W

D. S69.9°W



26. 43★ is a 3-digit number, where ★ is an integer from 0 to 9 inclusive. Find the probability that the 3-digit number is divisible by 3.

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

B. $\frac{1}{5}$

C. $\frac{2}{5}$

D. $\frac{3}{10}$

27. A letter is chosen at random from each of the words 'RING' and 'RIBBON'. Find the probability that the two letters are the same.

A. $\frac{1}{8}$

B. $\frac{1}{6}$

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

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

28. Two fair dice are thrown in a game. If the sum of the two numbers is greater than 10, \$120 will be gained; otherwise, \$24 will be gained. Find the expected gain of the game.

A. \$28

B. \$30

C. \$32

D. \$34

29. The following stem-and-leaf diagram shows the temperatures of some cities at noon on a certain day.

Temperatures of some cities at noon

Stem (10°C)	Leaf (1°C)
1	2 3 9
2	0 1 x 8
3	1 y 7

If the mean temperature of the cities at noon on that day is 24°C, then $x + y =$

A. 9.

B. 10.

C. 11.

D. 12.

30. The following table shows the scores of Jacky in a job interview.

	Experience	Language skills	IT skills
Scores	80	75	x
Weight	3	2	2

If the weighted mean score of Jacky in the interview is 74, find the value of x.

A. 61

B. 64

C. 67

D. 70

END OF PAPER