Term 2 Assessment 2025 – 2026

Revision Exercise (Set 2)

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.

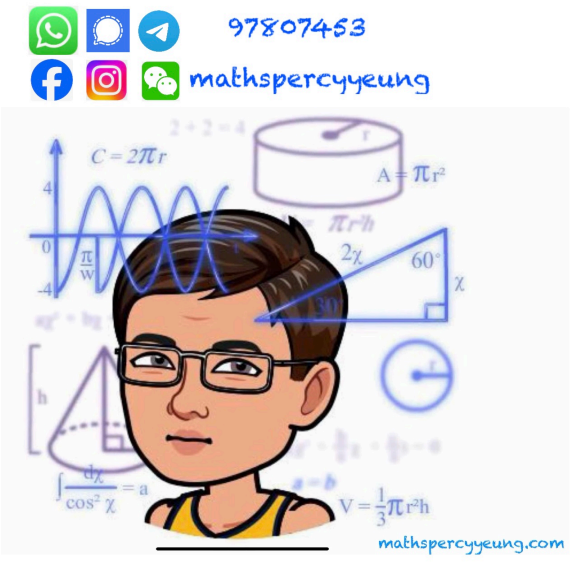
(2) Each question carries 1 mark.

(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. $2^{400} \times 9^{200} =$

   A. 6^{200}.

   B. 6^{400}.

   C. 18^{200}.

   D. 18^{400}.

2. It is given that p and q are non-zero numbers and m is an integer. Which of the following must be true?

   I. $p^{-m} = -p^m$

   II. $p^m \div q^m = (p \div q)^m$

   III. $(q+q)^m = q^m + q^m$

   A. I only

   B. II only

   C. I and III only

   D. II and III only

3. Represent the expression $2^{10} + 2^7 + 7$ as a binary number.

   A. $1\ 001\ 000\ 111_2$

   B. $10\ 001\ 001\ 110_2$

   C. $10\ 010\ 000\ 111_2$

   D. $10\ 010\ 000\ 101_2$

4. Factorize $-5n+n^2-24$.

   A. $(n-3)(n+8)$

   B. $(n-4)(n+6)$

   C. $(n+3)(n-8)$

   D. $(n+4)(n-6)$

5. Which of the following has the factor $2p-q$?

   A. $8p^2+14pq-9q^2$

   B. $8p^2-14pq+9q^2$

   C. $2p^2-3pq+2q^2$

   D. $2p^2-3pq-2q^2$

6. Solve the inequality $8(x+2)+9(x-5)<-80$.

   A. $x<-3$

   B. $x>-3$

   C. $x<3$

   D. $x>3$

7. Alice's original weight was w kg. After joining a fitness programme, Alice's weight decreases by over 20%. If her new weight is 60 kg, find the range of values of w.

   A. $w>48$

   B. $w>50$

   C. $w>72$

   D. $w>75$

8. If $x \leq y < 0$, which of the following must be correct?

I. $-2x \geq -2y$

II. $\frac{1}{x} \geq \frac{1}{y}$

III. $x^2 \geq y^2$

A. I and II only

B. I and III only

C. II and III only

D. I, II and III

9. A number first increases by $a\%$, and then decreases by $a\%$, the result is M. Which of the following is true?

I. The original number is equal to M.

II. The original number is greater than M.

III. The original number is $M \times (1+a\%) \times (1-a\%)$.

A. I only

B. II only

C. III only

D. II and III only

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

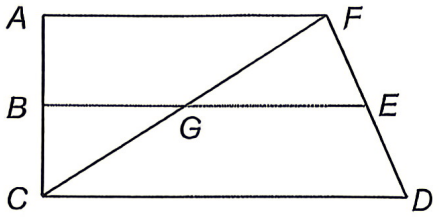
A. \$24 409

B. \$23 893

C. \$22 080

D. \$11 487

11. In the figure, $AF//BE//CD$. BE and CF intersect at G. $AC \perp CD, AB = BC = 3$, $CD = 10$ and $FG = 5$, then $BE =$



A. 7.5 .

B. 8.

C. 8.5 .

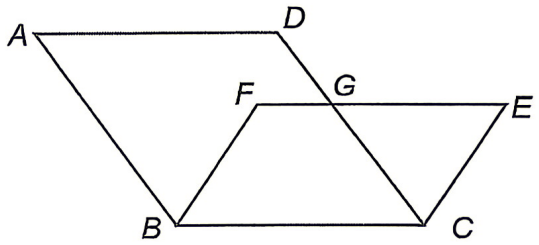
D. 9 .

12. In the figure, $ABCD$ and $BCEF$ are parallelograms. CD and EF intersect at G. Which of the following are true?

I. $\angle ADC = \angle BFE$

II. $\angle BAD = \angle DGF$

III. $AD = FE$



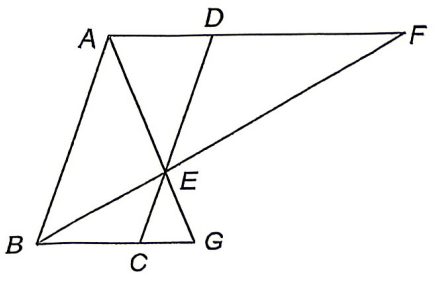
A. I and II only

B. I and III only

C. II and III only

D. I, II and III

13. In the figure, $ABCD$ is a parallelogram. E is a point lying on CD such that $DE : EC = 5 : 2$. AD produced and BE produced meet at F while AE produced and BC produced meet at G. If the area of ΔCEG is 24 cm^2, then the area of ΔDEF is



A. 60 cm^2 .

B. 150 cm^2 .

C. 294 cm^2 .

D. 375 cm^2 .

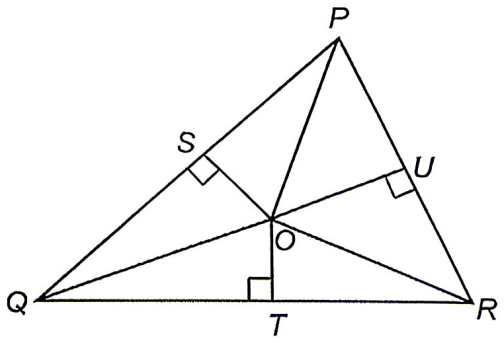
14. In the figure, O is the circumcentre of ΔPQR. S, T and U are points on PQ, QR and PR respectively such that $OS \perp PQ$, $OT \perp QR$ and $OU \perp PR$. Which of the following must be true?

A. $PQ = QR$

B. $OS = OT$

C. $OQ = OR$

D. $OU = PU$



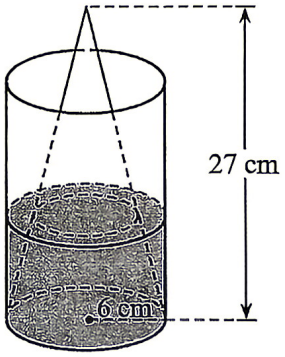
15. As shown in the figure, after putting a right circular cone into a cylindrical container, the depth of water is one third of the height of the cone. Given that the base radius of the cone and that of the cylindrical container are the same of 6 cm. Find the volume of water inside container.

A. $96\pi\ \text{cm}^3$

B. $216\pi\ \text{cm}^3$

C. $228\pi\ \text{cm}^3$

D. $324\pi\ \text{cm}^3$



16. The volume of a cylindrical steel rod is 30 m^3. In cold weather, the rod contracts to a smaller rod which is similar to the original rod. If the length of the rod is decreased by 2%, find its decrease in volume, correct to nearest 0.1 m^3.

A. 2.4 m^3

B. 1.8 m^3

C. 0.8 m^3

D. 0.6 m^3

17. The surface area of a sphere is $576\pi\,\text{cm}^2$. Find its diameter.

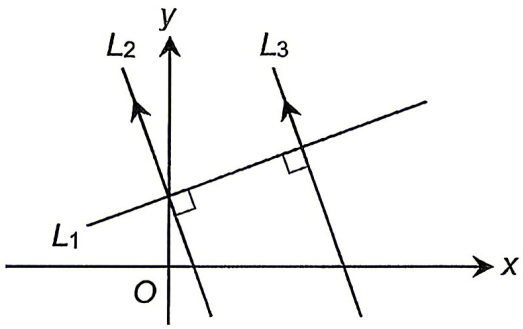
A. 12 cm

B. 24 cm

C. 36 cm

D. 48 cm

18. In the figure, the straight line L_1 is perpendicular to a pair of parallel lines L_2 and L_3. Which of the following may be the slopes of L_1, L_2 and L_3?



	Slope of L_1	Slope of L_2	Slope of L_3
A.	0.2	–1	–1
B.	0.5	–2	–4
C.	0.25	–2	–2
D.	0.25	–4	–4

19. The coordinates of E and F are (12, 2) and $(-2,-5)$ respectively. If line segment EF intersects the x-axis at point S, find $ES : SF$.

A. 1 : 3

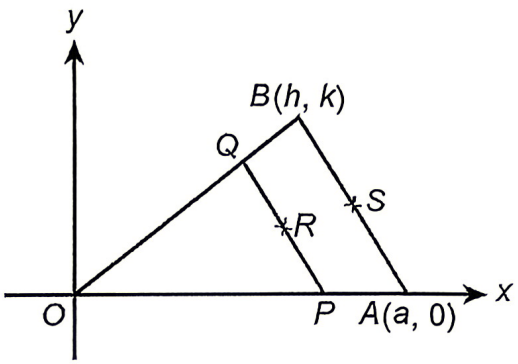
B. 1 : 6

C. 2 : 5

D. 3 : 5

20. The figure shows ΔOAB . P and Q are points on OA and OB respectively such that $OP : PA = OQ : QB = 3 : 1$. R and S are the mid-points of PQ and AB respectively.

Which of the following is/are **INCORRECT** ?



I. $PQ = \frac{3}{4}AB$

II. $OB = OS$

III. O, R and S are collinear.

A. I only

B. II only

C. I and III only

D. II and III only

21. Given that $\cos(90° - \theta) = x$, where θ is an acute angle, find the value of $1 - \frac{\sin^2(90° - \theta)}{1 + \cos(90° - \theta)}$.

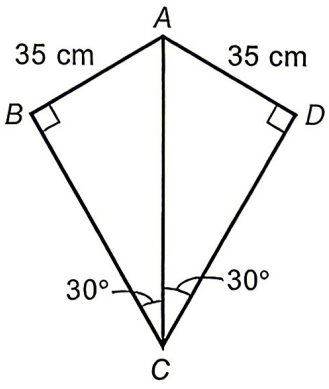
A. x

B. $x + 1$

C. $-x$

D. $-x + 1$

22. The figure shows a kite $ABCD$. Find the area of $ABCD$.



A. $\frac{1\,225\sqrt{3}}{3}$ cm^2

B. $\frac{1\,225\sqrt{2}}{2}$ cm^2

C. $1\,225\sqrt{2}$ cm^2

D. $1\,225\sqrt{3}$ cm^2

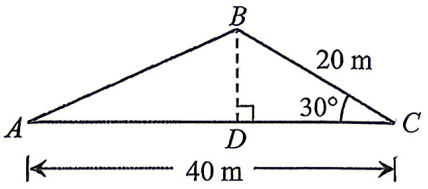
23. The figure shows two inclined roads AB and BC. ADC is a horizontal line. Find the gradient of AB, correct to 3 significant figures.

A. 0.441 .

B. 0.577 .

C. 0.764 .

D. 2.26 .



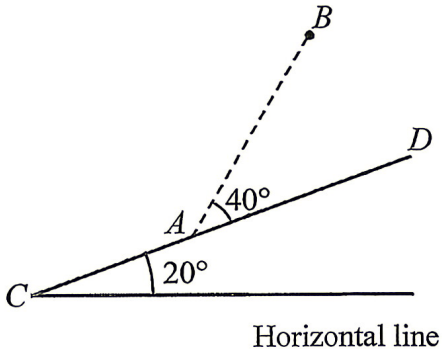
24. In the figure, CD is an inclined plane with inclination $20°$. A is a point on the plane and B is a point above the plane. Find the angle of depression of A from B.

A. 30°

B. 40°

C. 50°

D. 60°



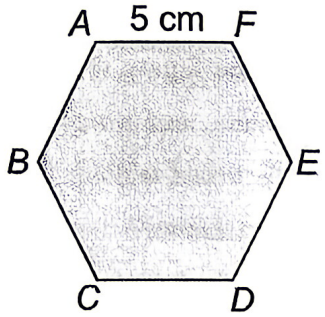
25. The figure shows a regular hexagon $ABCDEF$ of side 5 cm. Find the area of hexagon $ABCDEF$, correct to 3 significant figures.

A. 50.0 cm^2

B. 65.0 cm^2

C. 75.2 cm^2

D. 130 cm^2



26. Three numbers '4', '5' and '8' are arranged randomly to form a 3-digit number. Find the probability that the number obtained is a multiple of 4.

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

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

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

D. $\frac{2}{3}$

27. There are 10 cups of vanilla ice-cream and x cups of chocolate ice-cream in the refrigerator. If a cup of ice-cream is selected randomly, the probability of selecting a cup of vanilla ice-cream is $\frac{2}{7}$. Find the value of x.

A. 10

B. 15

C. 25

D. 35

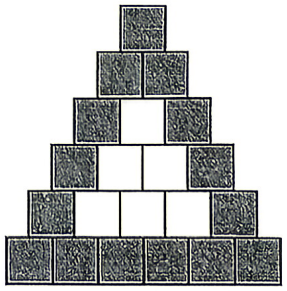
28. In the figure, the dartboard is divided into 21 equal parts. Hitting the shaded region scores 7 points, and hitting the white region scores 3.5 points. If a dart hits a point at random on the dartboard without hitting the boundaries, what is the expected value of points scored for each dart thrown?

A. 3.5 points

B. 4 points

C. 6 points

D. 7 points



29. Which of the following averages is/are **not** affected by the extreme data?

I. Mean

II. Median

III. Mode

A. I only

B. II only

C. III only

D. II and III only

30. The table below shows the marks that Amy and David got in various subjects in an examination and the weight of each subject.

	English	Chinese	Mathematics	General Studies
Amy	56	75	88	72
David	72	55	80	90
Weight	x	x	x	3

It is given that Amy's weighted mean mark is 72.8 . Which of the following is/are true?

I. English is considered as more important than General Studies.

II. Amy's weighted mean mark is higher than David's.

III. If the weight of each subject is multiplied by 2, Amy's weighted mean mark will be increased.

A. I only

B. II only

C. I and III only

D. II and III only

END OF PAPER