WKF F2 Term 1 Revision Exercise A 2024 - 2025 paper 2

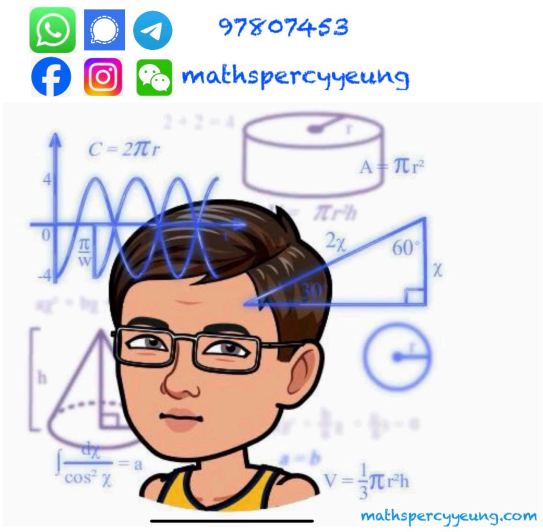
Term 1 Assessment Revision Exercise 2024 – 2025

Set A

Grade:	8	Name:	
Subject:	Mathematics	Class:	( )
Paper:	II	Group:	
Date:		Full Marks:	26
Time Allowed:	50 minutes		

Instructions

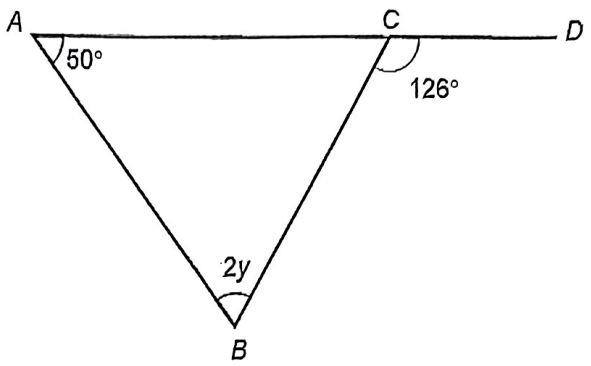
1. There are 26 questions in the paper. You should check that all the questions are there. Look for the words '**END OF PAPER**' after the last question.
2. Each question carries 1 mark.
3. **ANSWER ALL QUESTIONS**. You are advised to use an HB pencil to mark all the answers on the MC Answer Sheet, so 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 MARKS** for that question.
5. No marks 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. In the figure, ACD is a straight line. Find y.



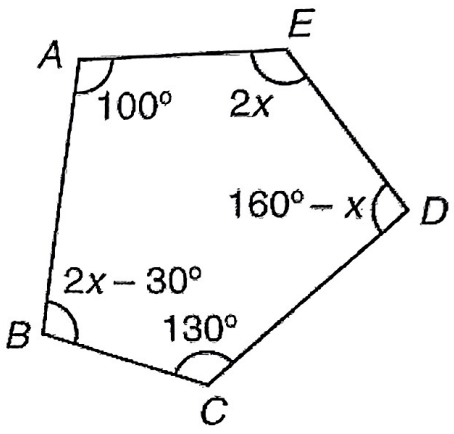
A 38°

B. 50°

C. 68°

D. 76°

2. In the figure, $ABCDE$ is a pentagon. Find x.



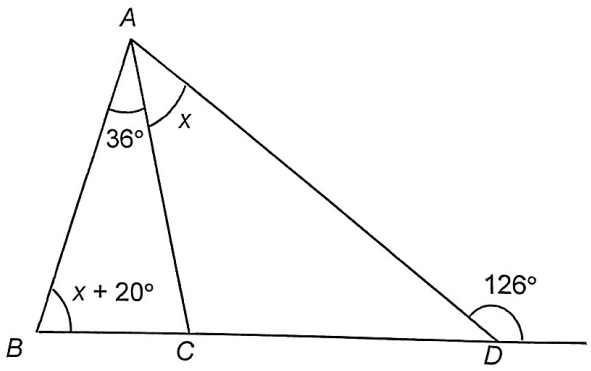
A. 60°

B. 65°

C. 70°

D. 75°

3. In the figure, BCD is a straight line. Find x.



A. 35°

B. 40°

C. 45°

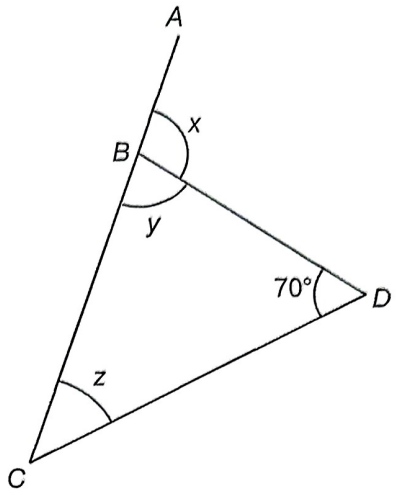
D. 50°

4. In the figure, ABC is a straight line. Which of the following must be true?

I. $y+z=110°$

II. $x-z=80°$

III. $y+2z-x=40°$



A. I only

B. II only

C. I and III only

D. II and III only

5. If the size of an interior angle of a regular polygon is 5 times that of its corresponding exterior angle, find the number of sides of the polygon.

A. 9

B. 12

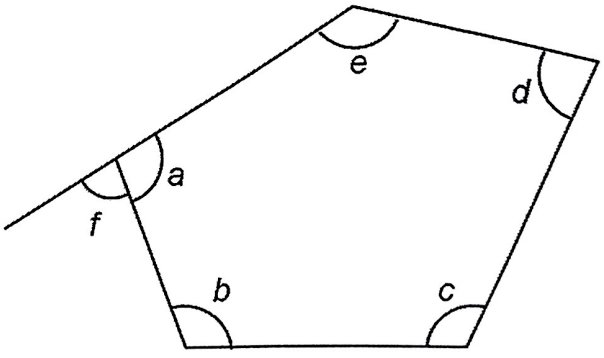
C. 15

D. 18

6. In the figure, one of the sides of the polygon is produced. Which of the following must be true?

I. $a+b+c+d+e=540°$

II. $b+c+d+e-f=360°$



A. I only

B. II only

C. All of them

D. None of them

7. Which of the following is / are an identity / identities?

I. $(x+5)(2x+1)=2x^2+7x+5$

II. $3x+5=8x-5(x-1)$

III. $2(4-x)(5-x)=2x^2-18x+40$

A. I only

B. II only

C. II and III only

D. I, II and III

8. Factorize $pq-q+p-1$.

A. $(q+1)(p-1)$

B. $(q-1)(p+1)$

C. $(q-1)(p-1)$

D. $(1-q)(1+p)$

9. Expand $-3(x+by)(by-x)$.

A. $x^2-3b^2y^2$

B. x^2-3by^2

C. $3x^2+3b^2y^2$

D. $3x^2-3b^2y^2$

10. Factorize $ax+4by+4bx+ay+4b+a$.

A. $(a+b+4)(x+y)$

B. $(a+b+1)(4x+y)$

C. $(x+y+1)(a+4b)$

D. $(x+y+4)(a+b)$

11. Which of the following is / are factor(s) of $a^2-2ac-b^2+2bc$?

I. $a+b$

II. $a-b$

III. $a+b-2c$

A. I only

B. II only

C. I and II only

D. II and III only

12. If $(6x-1)(4x^2+3) \equiv Px^3+Qx^2+Rx-S$, find the values of P, Q, R and S.

	P	Q	R	S
A.	24	-4	18	3
B.	24	-4	18	-3
C.	24	4	-18	3
D.	-24	4	18	2

13. Factorize $16a^4 - 1$.

A. $(2a-1)^4$

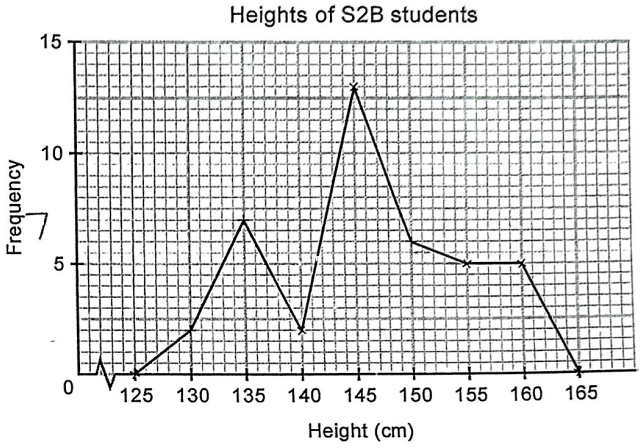
B. $(2a+1)(2a-1)(4a^2+1)$

C. $(4a^2-1)^2$

D. It cannot be factorized.

14. The following frequency polygon shows the heights of S2B students.

How many students are there in the class?



A. 35

B. 38

C. 40

D. 46

15. Air is a composition of different types of gases. If we want to show the percentage of each type of gas in air, which statistical chart should be used?

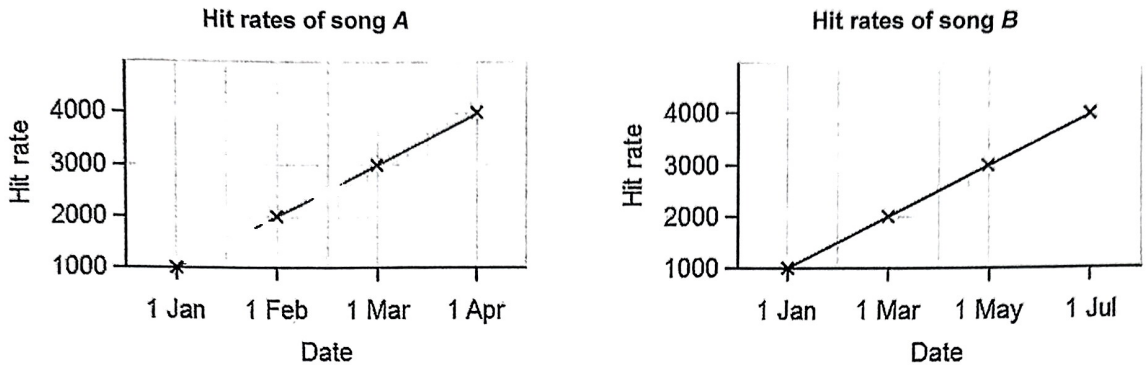
A. Bar chart

B. Pie chart

C. Frequency polygon

D. Histogram

16. The broken line graphs below show the hit rates of two different songs *A* and *B* in 2020.



Jacky claims that the hit rates of the two songs are increasing at the same rate.

Which of the following is the best reason that Jacky is misled by the above charts?

A. The hit rates of the songs on other days are not compared.

B There is no comparison of the hit rates of other songs.

C. The dates of recording the hit rates of two songs are not the same.

D. The vertical axes do not start from zero.

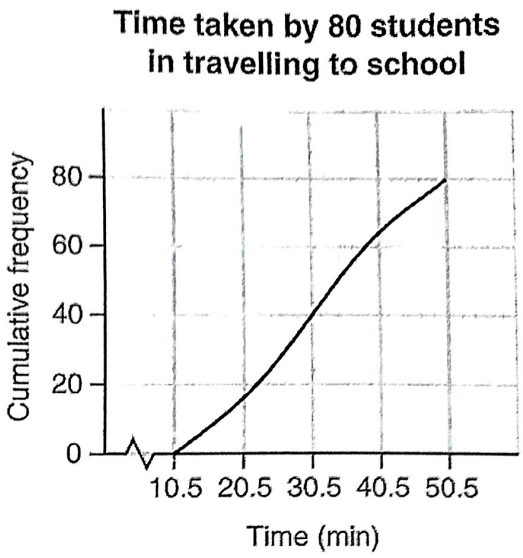
17. The following table shows the heights (in cm) of a group of children.

Height (cm)	121 – 130	131 – 140	141 – 150	151 – 160
Frequency	7	10	13	4

Find the lower and the upper class limits of the class interval 131 cm – 140 cm.

	Lower class limit	**Upper class limit**
A.	130cm	141cm
B.	130.5cm	140.5cm
C.	131cm	140cm
D.	131.5cm	139.5cm

18. The cumulative frequency curve below shows the time (in min) taken by 80 students in travelling to school. Which of the following is/are correct?



I. The lower quartile of time is 21.5 hours.

II. The 75th percentile of time is 38.5 hours.

III. The median of time is 30.5 hours.

A. I only

B. II only

C. I and III only

D II and III only

19. The following table shows the weights (in kg) of S2A students.

Weight (kg)	20 – 29	30 – 39	40 – 49	50 – 59	60 – 69	70 – 79
Number of students	1	3	19	7	8	2

Which of the following is/are correct?

I. The class width of the class interval 40 kg – 49 kg is 10 kg.

II. The class mark of the class interval 40 kg – 49 kg is 45 kg.

III. The class boundaries of the third class interval are 40 kg and 49 kg.

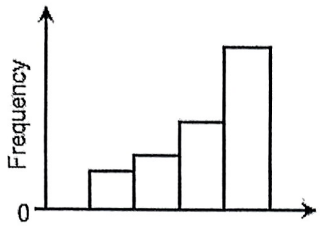
A. I only

B. II only

C. I and III only

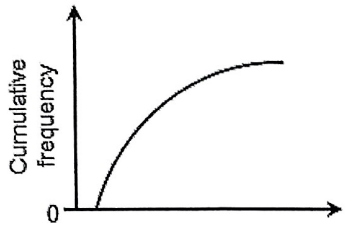
D. II and III only

20. The graph below shows a histogram.

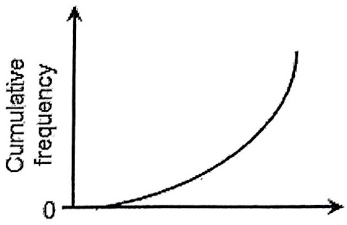


Which of the following may be the corresponding cumulative frequency polygon/curve?

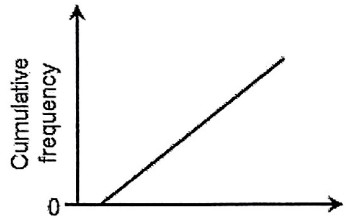
A.



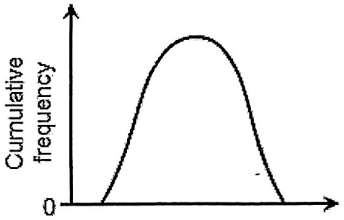
B.



C.



D.



21. Determine whether a rate or ratio should be used to relate the quantities in each of the following statements.

(i) The selling price of 100 g of pork is $30.1.

(ii) The heights of Susan and Pauline are 1.45 m and 1.54 m respectively.

	(i)	(ii)
A.	Rate	Ratio
B.	Ratio	Rate
C.	Ratio	Ratio
D.	Rate	Rate

22. If $x : y = 7 : 3$ and $y : z = 5 : 4$, then $x : y : z =$

A. $35 : 12 : 15$.

B. $35 : 15 : 12$.

C. $7 : 3 : 4$.

D. $7 : 5 : 4$.

23. The scale of a map is 1 : 200 000. If the distance between lighthouse A and lighthouse B on the map is 5.23 cm, then the actual distance between the two lighthouses is

A. 2.46 km.

B. 2.62 km.

C. 10.37 km.

D. 10.46 km.

24. The ratio of the numbers of boys and girls in a class is 3 : 7. The number of girls is 16 more than that of boys. How many students are there in the class?

A. 37

B. 38

C. 39

D. 40

25. If r and s are non-zero numbers such that $\frac{2r+s}{3r+4s}=\frac{2}{5}$, then $(2r+3s):4r=$

A. $5:4$.

B. $3:2$.

C. $17:12$.

D. $19:20$.

26. It takes T days for n workers to complete a job. If the job needs to be completed 3 days earlier, how many workers are required to complete the same job? (Assume all workers work at the same rate.)

A. $\frac{nT}{T+3}$

B. $\frac{nT}{T-3}$

C. $\frac{(T+3)}{nT}$

D. $\frac{(T-3)}{nT}$

END OF PAPER