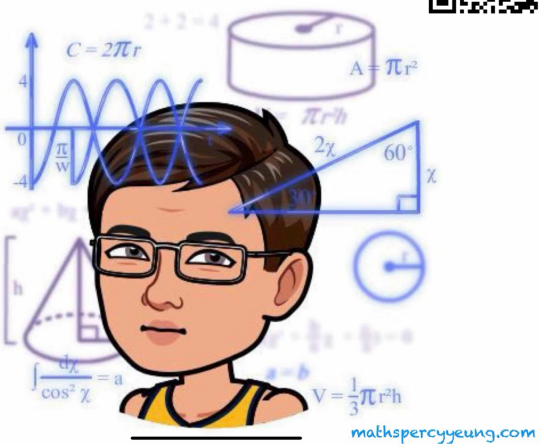


FINAL EXAMINATION

2024 – 2025

Subject: **Secondary 1 Mathematics**

Paper: I

Time Allowed: **1 hour**

Total Marks: **100**

No. of pages: **14**

INSTRUCTIONS

(1) Write your name, class and examination number in the spaces provided on Page 1.

(2) This paper consists of Two Sections, A and B.

(3) Attempt **ALL** questions in **ALL** Sections. Write your answers in the spaces provided in this Question-Answer Book. Do not write in the margins.

(4) Unless otherwise specified, the use of HKEAA approved electronic calculators is allowed.

(5) Unless otherwise specified, all working must be clearly shown.

(6) Unless otherwise specified, numerical answers should be **exact** or **correct to 3 significant figures**.

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

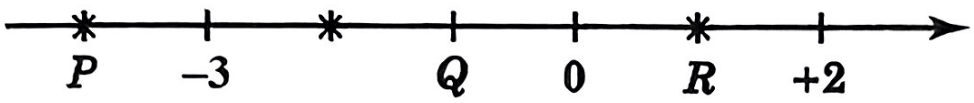
Page	Marks	
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
Total		

Section A (70 marks): Working steps must be shown in answering questions in this section.

1. Determine whether the following statement is correct. **Circle** the correct answers. (4 marks)

(a)	2 is a prime number.	True / False
(b)	π is an integer.	True / False
(c)	$\frac{3}{2}$ is an improper fraction.	True / False
(d)	3 is an even number.	True / False

2. Refer to the given number line.



(a) Write down the directed numbers represented by P, Q and R on the number line below. (3 marks)

P = _____ Q = _____ R = _____

(b) For the numbers represented by the letters, (2 marks)

(i) which one is the largest?

(ii) which one is the smallest?

3. Find the values of the following expressions by removing the brackets. (9 marks)

(a) $(+9) + (-7) - (+13)$

(b) $4 - (-3 + 5)$

(c) $2 - 3(6 - 4)$

(d) $\dfrac{(-4) - (-7)}{(-2)(+15)}$

4. Represent the following word phrases by algebraic expressions. (2 marks

(a) Multiply x by 3, and then add y to the product.

(b) Divide r by 2, and then subtract 4 from the quotient.

5. Simplify the following expressions. (4 m

(a) $4x - 8x - 6 + 3$

(b) $3a \times 8 - 7a$

Go on to the next page

6. Solve the following equations (13 marks)

(a) $3x+5=11$

(b) $\frac{3+t}{8}=-2$

(c) $4(p-5)+17=5$

(d) $7-e=2e-2$

(e) $\frac{4x}{3}-\frac{7x}{6}=5$

Answers written in the margin ...

7. The sum of x and 15 is 51. Find the value of x. (2 marks)

8. The subtraction of 4 from y is 9. Find the value of y. (2 marl

9. When 3 is subtracted from 3 times d, the result is 12. Find the value of d. (3 1

Go on to the next page

10. There are 70 students in a school hall and 42 of them are girls. Find the percentage of students in the school hall who are girls. (2 marks)

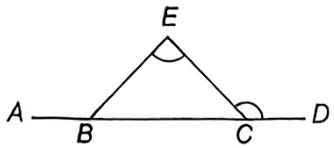
11. The number of mooncakes sold last year was 850 and the number of mooncakes sold this year decreases by 8%. (4 marks)

(a) Find the decrease in the number of mooncakes sold.

(b) Find the number of mooncakes sold this year.

12. Charles bought a pair of new jeans and its length after washing was 39.9 cm, which is decreased by 5%. What was the original length of the pair of jeans? (2 marks)

13. Name three line segments and the marked angles in the figure.



ABCD is a straight line.

Three Line segments: ___ _____ (3 marks)

Marked angles: _____ (2 marks)

14. Consider the following angles.

$a = 50°$, $b = 106°$, $c = 90°$, $d = 270°$, $e = 8°$, $f = 150°$

Classify the type of each angle ***(a, b, c, d, e, f)*** and complete the table. (6 r

Acute angle	**Right angle**	**Obtuse angle**	**Reflex angle**
a			

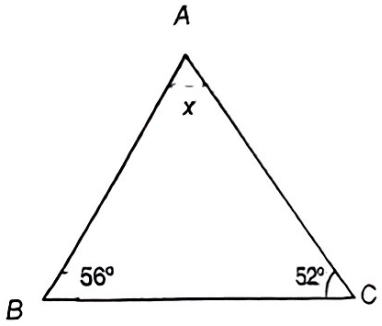
Go on to the next page

15. Express the following angles in degrees. (4 marks)

(a) 2 right angles

(b) $\frac{5}{3}$ straight angles

16. Find the unknown in the figure. (3 marks)



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Section B (30 marks): Working steps must be shown in answering questions in this section.

1. Given the formula $T = x^2 - 4y$.

   (a) When $x = -3, y = -2$, find the value of T. (2 marks)

   (b) When the new values of x and y are 3 and 2 respectively, find the change in value of T. (4 marks)

2. The cost of a table is \$990. If the table is sold at a discount of 40% on its marked price, then the percentage loss is 20%. Find the **selling price** and **marked price** of the table. (4 marks)

3. In city A, the population in 2019 is 14% more than that in 2018. It is given that the population in 2019 is 57 000.

   (a) Find the population in 2018. (3 marks)

   (b) If the population in 2020 is 14% less than that in 2019, are the populations in 2018 and 2020 the same? Explain your answer. (3 marks)

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Page total

4. Daisy pays \$68 for 5 notebooks and 2 pencils. If the price of each notebook is 3 times that of a pencil, find

(a) the price of a pencil, (2 marks)

(b) the total price of 4 notebooks and 3 pencils. (2 marks)

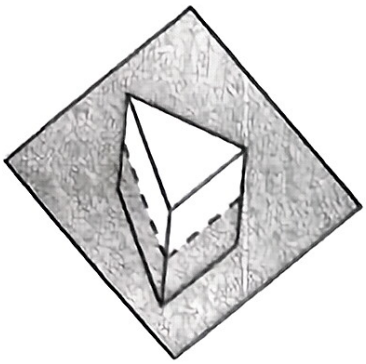
Go on to the next page

5. There are two sections in a test. Judy gets x marks in the first section. The mark she gets in the second section is 10 less than three times that in the first section.

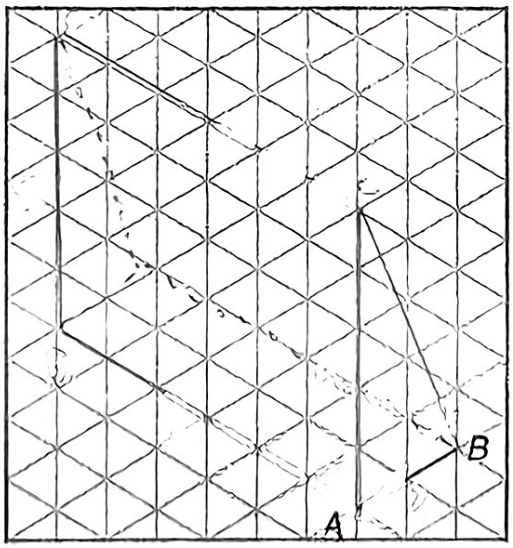
(a) Express Judy's mark in the second section in terms of x. (1 mark)

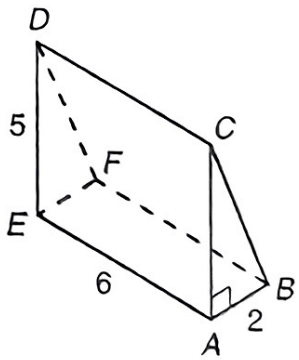
(b) If Judy gets 86 marks in the test, can she get higher than 60 marks in the second section? Explain your answer. (3 marks)

6. Sketch the cross-section obtained when the right prism is cut at the dotted line along the given plane. (2 marks)



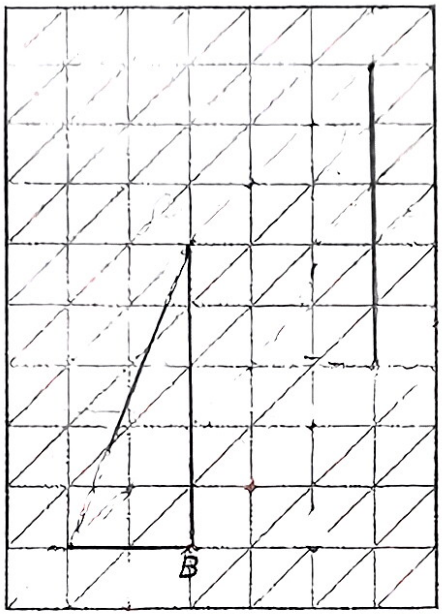
7. Draw the 2-D representation of the following right prism on the given isometric grid paper. (2 marks)

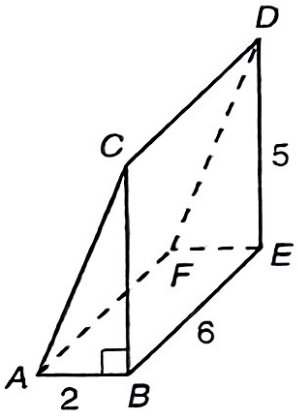




8. Draw the 2-D representation of the following right prism on the given oblique grid paper.

(2 marks)





Answers written in the margins will not be marked.

END OF PAPER