

2024 – 2025  
S1 First Term Uniform Test 2

## MATHEMATICS

11<sup>th</sup> December, 2024

Time Allowed: 30 minutes

### INSTRUCTIONS

1. Read carefully the instructions on the Answer Sheet. After the announcement of the start of the examination, you should insert the information required in the spaces provided.
2. When told to open this book, you should check that all the questions are there. Look for the words ‘**END OF PAPER**’ after the last question.
3. All questions carry equal marks.
4. **ANSWER ALL QUESTIONS.** You should use an HB pencil to mark all your answers on the Answer Sheet, so that wrong marks can be completely erased with a clean rubber. You must mark the answers clearly; otherwise you will lose marks if the answers cannot be captured.
5. You should mark only **ONE** answer for each question. If you mark more than one answer, you will receive **NO MARKS** for that question.
6. No marks will be deducted for wrong answers.
7. The diagrams in this paper are not necessarily drawn to scale.
8. No calculator is allowed.

**Choose the best answer for each question.**

1. Calculate  $11 - (4 - 2) \times 5$ .

- A. 1
- B. 25
- C. 45
- D. 84

2. Which of the following is true?

- A.  $-7 < 0 < -\frac{1}{2} < 3.5$
- B.  $0 < -\frac{1}{2} < 3.5 < -7$
- C.  $-\frac{1}{2} < 3.5 < -7 < 0$
- D.  $-7 < -\frac{1}{2} < 0 < 3.5$

3. Find the H.C.F. of  $2^2 \times 3 \times 7^2$  and  $2^3 \times 5^2 \times 7$ .

- A.  $2^2 \times 7$
- B.  $2^2 \times 3 \times 7$
- C.  $2^3 \times 3 \times 5 \times 7$
- D.  $2^3 \times 5^2 \times 7^2$

4. Which of the following numbers is not divisible by 4?

- A. 18 286
- B. 25 460
- C. 41 076
- D. 50 292

5.  $600 =$

- A.  $2 \times 3 \times 5$ .
- B.  $2^2 \times 3 \times 5^2$ .
- C.  $2^3 \times 3 \times 5$ .
- D.  $2^3 \times 3 \times 5^2$ .

6. Which of the following algebraic expressions represents the word sentence 'Subtract  $d$  from the product of  $h$  and  $k$ '?

- A.  $dhk$
- B.  $d - hk$
- C.  $hk - d$
- D.  $\frac{h}{k} - d$

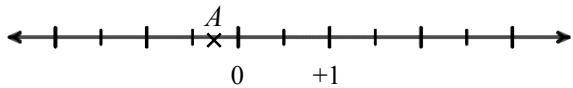
7. Simplify  $k \times k - 14 + 2k^2 - 7$ .

- A.  $4k^2 - 21$
- B.  $2k^2 + 2k - 7$
- C.  $3k^2 - 7$
- D.  $3k^2 - 21$

8. Simplify  $(3a) \div b \times (2c)$ .

- A.  $\frac{3a}{2bc}$
- B.  $\frac{6ac}{b}$
- C.  $\frac{6a}{bc}$
- D.  $\frac{3ab}{2c}$

9. Refer to the number line below.



Which of the following is a possible value of  $A$ ?

- A.  $+0.3$
- B.  $-0.5$
- C.  $-\frac{1}{4}$
- D.  $-\frac{3}{5}$

10. The general term of a sequence is  $-3(n+2)+27$ . Find the 8<sup>th</sup> term of the sequence.

- A. 3
- B. -3
- C. -30
- D. -57

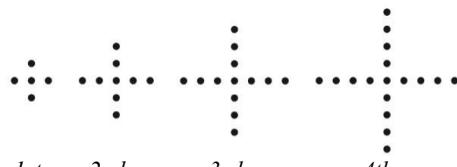
11. Solve the equation  $x + \frac{2}{3}x - 7 = 8$ .

- A.  $x = \frac{3}{5}$
- B.  $x = 1$
- C.  $x = 9$
- D.  $x = 15$

12. Solve the equation  $\frac{a-7}{3} = -\frac{2a}{5}$ .

- A.  $a = -35$
- B.  $a = -7$
- C.  $a = \frac{7}{11}$
- D.  $a = \frac{35}{11}$

13. The following shows a sequence of figures formed by dots. The 1st figure consists of 5 dots. For any positive integer  $n$ , the  $(n+1)$ th figure is formed by adding 4 dots to the  $n$ th figure.



How many dots are there in the 6th figure?

- A. 17
- B. 21
- C. 25
- D. 29

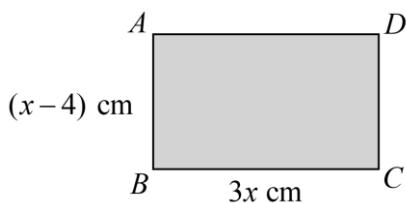
14. Consider the formula  $P = s + 2(s+1) - 7$ . If  $s = -3$ , find the value of  $P$ .

- A. -18
- B. -14
- C. -6
- D. -2

15. The price of a hamburger is \$3 less than twice the price of a hot dog. If Danny pays \$64 for 3 hot dogs and 2 hamburgers, find the price of a hamburger.

- A. \$7
- B. \$10
- C. \$13
- D. \$17

16. The figure shows a rectangle  $ABCD$  with perimeter 32 cm. Find the area of  $ABCD$ .



- A.  $5 \text{ cm}^2$
- B.  $9 \text{ cm}^2$
- C.  $15 \text{ cm}^2$
- D.  $27 \text{ cm}^2$

17. There are some \$2 and \$5 coins in a purse. If there are 23 coins and their total value is \$67, find the number of \$2 coins.

- A. 14
- B. 16
- C. 18
- D. 20

18. The price of a pen was \$20 last year. Find the percentage change in the price if the pen is \$16 this year.

- A.  $-25\%$
- B.  $-20\%$
- C.  $+20\%$
- D.  $+25\%$

19. A book has 690 pages. Cathy has read 20% of the book. How many pages has Cathy read?

- A. 138
- B. 414
- C. 552
- D. 828

20. The weight of a puppy increases by 150% this year to 6.75 kg. What was its weight last year?

- A. 2.7 kg
- B. 3.4 kg
- C. 4.2 kg
- D. 4.5 kg