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Centre Number

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Student Number

2025 TESTIFI EXAMINATION

Magnitude of Integers

General Instructions

- Reading time – 5 minutes
- Working time – 20 minutes
- Write using black pen
- Calculators approved by NESAs may be used
- A reference sheet is provided at the back of this paper
- For questions in Section II, show relevant mathematical reasoning and/or calculations
- Write your Centre Number and Student Number at the top of this page

Total marks:
12

Section I – 2 marks

- Attempt Questions 1–2

Section II – 10 marks

- Attempt Questions 3–9

Section I

2 marks

Attempt Questions 1–2

Allow about 15 minutes for this section

Use the multiple-choice answer sheet for Questions 1–2.

- 1** A submarine is at a depth of -45 metres. It descends 12 metres, then ascends 8 metres. What is the submarine's final depth?
- A. -37 metres
 - B. -41 metres
 - C. -49 metres
 - D. -65 metres
- 2** Over three days, the temperature changes in a city were: Day 1: decreased by 8°C , Day 2: increased by 15°C , Day 3: decreased by 12°C . If the starting temperature was 22°C , which statement correctly describes the net change and final temperature?
- A. Net decrease of 3°C , final temperature 19°C
 - B. Net decrease of 5°C , final temperature 17°C
 - C. Net increase of 5°C , final temperature 27°C
 - D. Net decrease of 7°C , final temperature 15°C

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Centre Number

Magnitude of Integers

Section II Answer Booklet

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Student Number

10 marks

Attempt Questions 3–9

Instructions

- Write your Centre Number and Student Number at the top of this page.
 - Answer the questions in the spaces provided. These spaces provide guidance for the expected length of response.
 - Your responses should include relevant mathematical reasoning and/or calculations.
 - Extra writing space is provided at the back of this booklet. If you use this space, clearly indicate which question you are answering.
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Please turn over

Question 3 (1 marks)

1

A submarine starts at sea level and descends 45 metres, then ascends 18 metres. What is the submarine's final depth below sea level?

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Question 4 (1 marks)

1

The temperature in a city was -12°C at midnight. By noon, it had increased by 8°C . What was the temperature at noon?

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Question 5 (1 marks)

1

A company had a loss of \$35,000 in January, a profit of \$52,000 in February, and a loss of \$28,000 in March. Calculate the net result for the three months.

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Question 6 (1 marks)

1

An elevator starts at the ground floor (level 0), goes up 8 floors, then down 12 floors, then up 3 floors. Determine the final floor level.

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Question 7 (1 marks)

1

A mountain climber starts at an altitude of 2,400 metres, descends 750 metres, then climbs 480 metres. What is the climber's final altitude?

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Question 8 (2 marks)

2

Over a five-day period, the daily temperature changes in a town were: Monday -7°C , Tuesday $+4^{\circ}\text{C}$, Wednesday -2°C , Thursday $+9^{\circ}\text{C}$, Friday -3°C . If the starting temperature on Sunday night was 2°C , calculate the temperature at the end of Friday and explain which day had the greatest temperature change in magnitude.

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Question 9 (3 marks)

3

A mining operation tracks elevation changes at three different sites over four days. Site A: Day 1 -15m , Day 2 $+8\text{m}$, Day 3 -12m , Day 4 $+6\text{m}$. Site B: Day 1 -18m , Day 2 $+11\text{m}$, Day 3 -9m , Day 4 $+4\text{m}$. Site C: Day 1 -20m , Day 2 $+14\text{m}$, Day 3 -7m , Day 4 $+9\text{m}$. All sites started at ground level (0m). Calculate the final elevation of each site, determine which site has the greatest net change in magnitude, and explain which site experienced the most variable daily changes.

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End of paper