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Centre Number

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Student Number

2025 TESTIFI EXAMINATION

Rational Numbers

General Instructions

- Reading time – 5 minutes
- Working time – 20 minutes
- Write using black pen
- Calculators approved by NESA 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 3–5

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 Which of the following numbers is irrational?

- A. $0.\bar{3}$
- B. 0.125
- C. $\sqrt{2}$
- D. 3.14

2 Which of the following numbers are all rational?

- A. $\frac{3}{4}$, 0.6, 25%
- B. $\frac{1}{2}$, $\sqrt{5}$, 0.75
- C. 2, π , $\frac{5}{8}$
- D. 0.5, $\sqrt{7}$, 40%

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Centre Number

Rational Numbers

Section II Answer Booklet

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Student Number

10 marks

Attempt Questions 3–5

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.
-

Please turn over

Question 3 (3 marks)

3

Classify each of the following numbers as rational or irrational and explain your reasoning:

newline

a) 0.625

newline

b) $0.\overline{27}$ (where the digits 27 repeat)

newline

c) $-\frac{5}{8}$

newline

d) 75%

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Question 4 (3 marks)

3

Classify each of the following numbers as rational or irrational and explain your reasoning:

newline

a) 0.375

newline

b) $0.\overline{6}$ (where the digit 6 repeats)

newline

c) $-\frac{7}{4}$

newline

d) 40%

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Question 5 (4 marks)

4

For each of the following numbers, explain whether it is rational. Where possible, express the number as a fraction in simplest form:

newline

a) $0.\overline{142857}$ (where the digits 142857 repeat)

newline

b) 1.41421356...

newline

c) $33.\overline{3}\%$

newline

d) π

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End of paper