NOVA SCOTIA PRE-CALCULUS 12 · UNIT C · 25 QUESTIONS

Rational Functions — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **Find the non permissible value of x for the expression $\frac{1}{x - 2}$.**

ANSWER _____

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2 **Find the non permissible value of x for the expression $\frac{1}{x - 3}$.**

ANSWER _____

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3 **Find the non permissible value of x for the expression $\frac{1}{x - 4}$.**

ANSWER _____

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4 **Find the non permissible value of x for the expression $\frac{1}{x - 5}$.**

ANSWER _____

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5 Find the non permissible value of x for the expression $\frac{1}{x - 6}$.

ANSWER

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6 Find the non permissible value of x for the expression $\frac{1}{x - 7}$.

ANSWER

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7 Find the non permissible value of x for the expression $\frac{1}{x - 8}$.

ANSWER

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8 Find the non permissible value of x for the expression $\frac{1}{x - 9}$.

ANSWER

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9 **Find the non permissible value of x for the expression $\frac{1}{x - 10}$.**

ANSWER _____

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10 **Find the non permissible value of x for the expression $\frac{1}{x - 11}$.**

ANSWER _____

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11 **Find the non permissible value of x for the expression $\frac{1}{x - 12}$.**

ANSWER _____

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12 **Find the non permissible value of x for the expression $\frac{1}{x - 13}$.**

ANSWER _____

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13 **Find the non permissible value of x for the expression $\frac{1}{x - 14}$.**

ANSWER _____

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14 **Find the non permissible value of x for the expression $\frac{1}{x - 15}$.**

ANSWER _____

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15 **A rational function is a ratio of**

A two polynomials

B two numbers only

C a polynomial and a sine function

D two exponential functions

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16 **The domain of a rational function excludes values that make**

A the numerator zero

B the denominator zero

C the function positive

D the function negative

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17 **A vertical asymptote of a rational function often occurs where**

A the numerator is zero

B the function is zero

C the denominator is zero and the numerator is not zero

D the graph crosses the y axis

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18 **A horizontal asymptote describes behaviour as x grows**

- A close to zero
- B equal to 1
- C negative only
- D very large in magnitude

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19 **A hole in a rational graph occurs where a factor is**

- A common to numerator and denominator
- B in the numerator only
- C in the denominator only
- D a constant

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20 **To add rational expressions, first find**

- A a common numerator
- B a common denominator
- C the product of the numerators
- D the sum of the denominators

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21 **The reciprocal of x is**

- A -x
- B x^2
- C 1 ÷ x
- D x + 1

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22 The function $y = \frac{1}{x}$ has a vertical asymptote at

- **A** $x = 1$
- **B** $y = 0$
- **C** $y = 1$
- **D** $x = 0$

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23 The function $y = \frac{1}{x}$ has a horizontal asymptote at

- **A** $y = 0$
- **B** $y = 1$
- **C** $x = 0$
- **D** $x = 1$

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24 **Simplifying a rational expression may require**

A adding numerators only

B factoring numerator and denominator

C squaring both sides

D taking a logarithm

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25 **A rational function with numerator degree less than denominator degree has horizontal asymptote**

A y equals 1

B no horizontal asymptote

C y equals 0

D x equals 0

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ANSWER KEY

1. 2
2. 3
3. 4
4. 5
5. 6
6. 7
7. 8
8. 9
9. 10
10. 11
11. 12
12. 13
13. 14
14. 15
15. A
16. B
17. C
18. D
19. A
20. B
21. C
22. D
23. A
24. B
25. C

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