NUNAVUT MATHEMATICS 20-1 · UNIT 6 · 10 QUESTIONS

Absolute Value and Reciprocal 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 **The solutions to the equation 2|x - 3| + 4 = 18 are**

- A x = 10 only
- B x = -10 and x = 4
- C x = -4 and x = 10
- D x = -4 only

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2 **The range of the function $y = 3|x + 2| - 4$ is**

A $y \geq -4$

B $y \leq -4$

C $y \geq 4$

D $y \geq -2$

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3 **For f(x) = x + 3, the invariant points of the graph of $y = \frac{1}{f(x)}$ occur when**



A x = 2 and x = 4

B x = -3 only

C x = -2 only

D x = -2 and x = -4

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4 **The product of the x-intercepts of the graph of y = |x - 3| - 5 is ____.**

ANSWER _____

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5 **The solutions to the equation |x + 2| = 2x - 1 are**

A x = -1

B x = 3 only

C x = -1

D no solution

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6 The vertical asymptotes of the graph of $y = \frac{1}{x^2 + 2x - 8}$ are

- **A** x = 2 and x = -4
- **B** x = -2 and x = 4
- **C** x = 2 only
- **D** x = -8 and x = 2

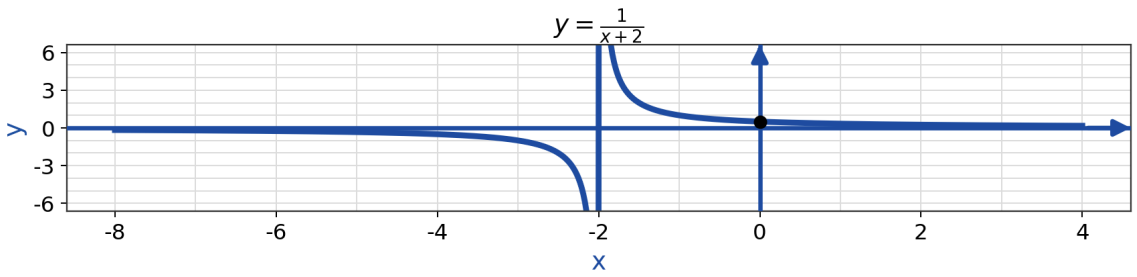
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7 The product of the solutions to the equation |3x + 1| = |x - 5| is ____.

ANSWER _____

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8 **Which of the following statements about the graph shown is true?**



A The graph has a vertical asymptote at x = 2

B The graph passes through the point (0, $\frac{1}{}$

C The graph has an x -intercept at (-2, 0)

D The graph has a horizontal asymptote at y = 1

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9 **An absolute value function has vertex (-3, 4), opens downward, and passes through the point (-2, 2). Its equation is**



A $y = 2|x + 3| + 4$

B $y = -2|x - 3| + 4$

C $y = -2|x + 3| + 4$

D $y = -\underline{1}$

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10 For the function $y = \frac{1}{x^2 + 4x - 12}$, the sum of the non-permissible values of x is ____.

ANSWER

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ANSWER KEY

1. C
2. A
3. D
4. -16
5. B
6. A
7. -3
8. B
9. C
10. -4

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