CALIFORNIA ALGEBRA II · UNIT 2 · 25 QUESTIONS

Rational and Radical 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 horizontal asymptote of f(x) = 3x/x + 5 is**

- **A** y = 5
- **B** y = 3
- **C** y = 0
- **D** y = -5

Understand It with Pulse | Flag a mistake

2 The simplified form of $x^2 - 9/x - 3$, for $x \neq 3$, is

- A $x - 9$
- B $x - 3$
- C $x + 9$
- D $x + 3$

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3 The function $f(x) = x^2 - 1/x - 1$ has a hole at

- A $x = -1$
- B $x = 1$
- C $x = 0$
- D $x = 2$

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4 The simplified form of $x^2 - 4x/x - 4$, for $x \neq 4$, is

- A x
- B 4
- C $x + 4$
- D $x - 4$

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5 The simplified form of $\sqrt{50}$ is

- A $5\sqrt{2}$
- B $10\sqrt{2}$
- C $25\sqrt{2}$
- D $2\sqrt{5}$

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6 The solution of $\frac{3}{x} = 6$ is

A 2

B -2

C $\frac{1}{2}$

D 18

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7 The solution of x - 1/x + 2 = 2 is

A 5

B -5

C 3

D -3

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8 **The solution of $\sqrt{x + 5} = 3$ is**

- A -4
- B 14
- C 4
- D 9

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9 **The domain of $f(x) = 1/x^2 - 4$ is**

- A $x \neq 2$
- B $x \neq 2$ and $x \neq -2$
- C all real numbers
- D $x \neq -2$

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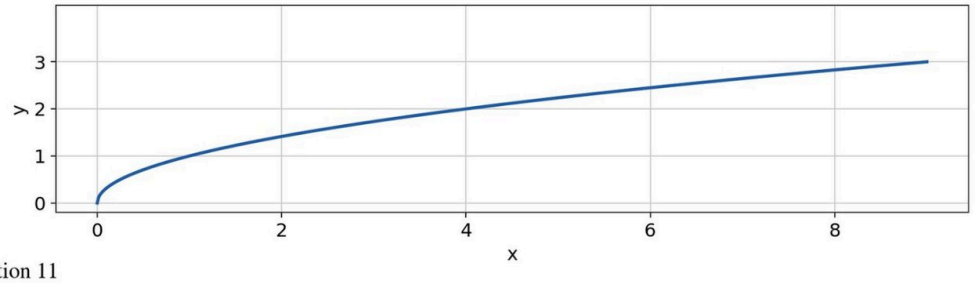
10 **The domain of $f(x) = \sqrt{5 - x}$ is**

- **A** all real numbers
- **B** $x \leq 5$
- **C** $x < 5$
- **D** $x \geq 5$

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11 **The graph below shows $y = \sqrt{x}$. The value of y when x = 4 is**

11 **The graph below shows $y = \sqrt{x}$. The value of y when x = 4 is**



Question 11

The graph below shows $y = \sqrt{x}$. The value of y when $x = 4$ is

A) 1

B) 4

C) 2

D) 16

A 1

B 4

C 2

D 16

A 1

B 4

C 2

D 16

Understand It with Pulse

Flag a mistake

12 The number of real solutions of $\sqrt{x} = x - 2$ is

- **A** 0
- **B** 2
- **C** 3
- **D** 1

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13 The product $\frac{x}{3} \cdot \frac{6}{x^2}$, for $x \neq 0$, is

- **A** $2x$
- **B** $\frac{2}{x}$
- **C** $\frac{6}{x}$
- **D** $\frac{1}{2x}$

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14 The simplified form of $\sqrt{18} \cdot \sqrt{2}$ is

- A 36
- B 6
- C $3\sqrt{2}$
- D $\sqrt{20}$

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15 The simplified form of $\sqrt{12} + \sqrt{27}$ is

- A $5\sqrt{2}$
- B $\sqrt{39}$
- C $5\sqrt{3}$
- D $6\sqrt{3}$

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16 The horizontal asymptote of $f(x) = 2x^2 + 1/x^2 - 3$ is

- A $y = 0$
- B $y = -3$
- C $y = 1$
- D $y = 2$

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17 The simplified form of $\frac{4x^2}{2x}$, for $x \neq 0$, is

- A $8x$
- B x
- C $2x$
- D $2x^2$

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18 **The function $f(x) = x^2 - 4/x + 2$ has a hole at**

- **A** $x = 0$
- **B** $x = 4$
- **C** $x = -2$
- **D** $x = 2$

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19 **The simplified form of $x^2 + 3x/x$, for $x \neq 0$, is**

- **A** $3x$
- **B** $x^2 + 3$
- **C** $x - 3$
- **D** $x + 3$

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20 The simplified form of $\sqrt{200}$ is

A $10\sqrt{2}$

B $2\sqrt{50}$

C $20\sqrt{2}$

D $5\sqrt{8}$

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21 The solution of $\frac{4}{x} = 2$ is

ANSWER _____

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22 **The solution of x + 2/x = 3 is**

A -1

B 2

C 3

D 1

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23 **The solution of $\sqrt{2x - 1} = 5$ is**

A 12

B 3

C 26

D 13

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24 **The horizontal asymptote of f(x) = 5x + 2/2x - 1 is**

- **A** $y = \frac{1}{2}$
- **B** $y = 5$
- **C** $y = \frac{5}{2}$
- **D** $y = 2$

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25 **The simplified form of $x^2 - 16/x + 4$, for $x \neq -4$, is**

- **A** $x - 4$
- **B** $x + 4$
- **C** $x - 16$
- **D** $x + 16$

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ANSWER KEY

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

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