CONNECTICUT ALGEBRA II · FINAL EXAM · 50 QUESTIONS

Final Exam — 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 **For f(x) = 3x -1 , f(5) is**

ANSWER _____

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2 **When (x + 1)(x + 5) is expanded , the coefficient of x is**

ANSWER _____

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3 **2^4 is**

ANSWER _____

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4 **The mean of 5, 5, 9, 11, 15 is**

ANSWER _____

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5 **For f(x) = 5x -3 , f(2) is**

ANSWER _____

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6 **When (x + 4)(x + 2) is expanded , the coefficient of x is**

ANSWER _____

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7 **$\log_2 8$ is**

ANSWER _____

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8 **The median of 4, 6, 8, 10, 12 is**

ANSWER _____

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9 **For $f(x) = x^2 - 4$, $f(5)$ is**

ANSWER

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10 **When $(x + 3)(x + 4)$ is expanded , the constant term is**

ANSWER

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11 **$\log_{10} 1000$ is**

ANSWER

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12 **The median of 3, 6, 9, 12, 20 is**

ANSWER

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13 **The slope of the line through (1, 2) and (4, 8) is**

ANSWER _____

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14 **The factored form of $x^2 + 5x + 6$ is**

A (x + 2)(x - 3)

B (x - 2)(x + 3)

C (x + 2)(x + 3)

D (x + 3)(x + 3)

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15 **10^3 is**

ANSWER _____

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16 **The number of combinations of 6 items taken 2 at a time is**

ANSWER _____

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17 **The slope of the line through (1, 5) and (4, 11) is**

ANSWER _____

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18 **The factored form of $x^2 + 10x + 21$ is**

A (x + 3)(x - 7)

B (x + 3)(x + 7)

C (x - 3)(x + 7)

D (x + 4)(x + 7)

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19 The sin 30° is

A $\sqrt{\frac{2}{2}}$

B $\sqrt{\frac{3}{2}}$

C 0

D $\frac{1}{2}$

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20 The number of permutations of 5 items taken 2 at a time is

ANSWER _____

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21 **The y intercept of the line y = 3x -2 is**

A (0, -2)

B (-2, 0)

C (0, 3)

D (3, -2)

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22 **For the polynomial $1x^3 + 2x^2 + 5x + 1$, the degree is**

ANSWER _____

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23 The sin 0° is

A $\frac{1}{2}$

B $\sqrt{\frac{2}{2}}$

C 0

D $\sqrt{\frac{3}{2}}$

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24 The number of permutations of 7 items taken 2 at a time is

ANSWER _____

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25 **The vertex of $y = (x - 2)^2 + 3$ is**

A (2, 3)

B (-2, 3)

C (2, -3)

D (0, 3)

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26 **For the polynomial $3x^2 + 2x + 6$ evaluated at $x = 2$, the value is**

ANSWER _____

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27 **The cos 45° is**

A $\frac{1}{2}$

B $\sqrt{\frac{2}{2}}$

C $\sqrt{\frac{3}{2}}$

D 0

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28 **A bag has 4 red marbles out of 10 marbles. The probability of drawing red is**

A $\frac{6}{10}$

B $\frac{4}{10}$

C $\frac{1}{3}$

D $\frac{4}{5}$

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29 The vertex of $y = (x - 1)^2 + 5$ is

- A (-1, 5)
- B (1, -5)
- C (0, 5)
- D (1, 5)

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30 For the polynomial $5x^2 + 1x + 6$ evaluated at $x = 2$, the value is

ANSWER _____

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31 If $2^x = 8$, then x is

ANSWER _____

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32 **A game pays 12 dollars with probability $\frac{1}{3}$ and 0 dollars otherwise . Its expected value in dollars is**

ANSWER

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33 **For f(x) = 3x + 2 and g(x) = x + 1 , f(g(2)) is**

ANSWER

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34 **One zero of (x - 3)(x + 1) is**

ANSWER

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35 **If $2^x = 32$, then x is**

ANSWER

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36 **A game pays 30 dollars with probability $\frac{1}{5}$ and 0 dollars otherwise . Its expected value in dollars is**

ANSWER

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37 **For f(x) = 4x -1 and g(x) = x + 1 , f(g(3)) is**

ANSWER

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38 **One zero of (x - 6)(x + 1) is**

ANSWER

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39 **A population of 200 doubles once. The new population is**

ANSWER

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40 **The range of 5, 5, 9, 11, 15 is**

ANSWER _____

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41 **For $f(x) = 2x^2$, $f(5)$ is**

ANSWER _____

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42 **The sum of the coefficients of $4x^2 + 2x + 4$ is**

ANSWER _____

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43 **The tan 30° is**

- A 1
- B $\sqrt{3}$
- C 0
- D $\sqrt{\frac{3}{3}}$

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44 **When data are skewed right, the mean is typically**

- A less than the median
- B equal to the median
- C equal to the mode
- D greater than the median

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45 **The function x^2 is an example of**

- **A** a linear function
- **B** a constant function
- **C** a cubic function
- **D** a quadratic function

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46 **The rational expression $\frac{6}{2}$ simplifies to**

ANSWER _____

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47 **The tan 0° is**

- A 1
- B $\sqrt{\frac{3}{3}}$
- C 0
- D $\sqrt{3}$

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48 **A large outlier typically has a greater effect on the**

- A median than on the mean
- B mode than on the mean
- C mean than on the median
- D range than on the mean

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49 The vertex of $y = (x - 4)^2 + 1$ is

A (4, 1)

B (-4, 1)

C (4, -1)

D (0, 1)

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50 The rational expression $\frac{20}{4}$ simplifies to

ANSWER _____

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ANSWER KEY

1. 14
2. 6
3. 16
4. 9
5. 7
6. 6
7. 3
8. 8
9. 21
10. 12
11. 3
12. 9
13. 2
14. C
15. 1000
16. 15
17. 2
18. B
19. D
20. 20
21. A
22. 3
23. C
24. 42
25. A
26. 22
27. B
28. B
29. D
30. 28
31. 3
32. 4
33. 11
34. 3
35. 5
36. 6
37. 15
38. 6
39. 400
40. 10
41. 50
42. 10
43. D
44. D
45. D
46. 3
47. C
48. C
49. A
50. 5

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