DELAWARE 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 **Evaluate $3x^3$ when $x = 2$.**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **Simplify $\frac{6}{12}$.**

A $\frac{6}{13}$

B $\frac{7}{12}$

C $\frac{1}{2}$

D 6

Understand It with Pulse | Flag a mistake

3 **A quantity starts at 200 and doubles each hour. After 2 hours, the quantity is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **How many ways can 2 items be arranged from 6 items, where order matters?**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **For $f(x) = x^2 + 2x + 2$, find $f(-3)$.**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **The equation $x^2 + -5x + 6 = 0$ has solutions**

A -2 and -3

B 2 and 3

C 2 and -3

D 0

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7 **Evaluate 2^3.**

ANSWER _____

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8 **The median of 4, 15, 16, 18, 23 is**

A 4

B 23

C 16

D 15

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9 **An arithmetic sequence starts with 1 and has common difference 2. The 8 term is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 The vertex of the parabola $y = (x - -1)^2 + -1$ is

A (1, -1)

B (-1, 1)

C (0, 0)

D (-1, -1)

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11 Evaluate 3^2.

ANSWER _____

Understand It with Pulse | Flag a mistake

12 How many ways can 2 items be arranged from 5 items, where order matters?

ANSWER _____

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13 The slope of the line through (-2, 2) and (0, 8) is

- A $\frac{7}{2}$
- B $\frac{2}{6}$
- C 6
- D 3

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14 Evaluate $2x^3$ when $x = -1$.

ANSWER _____

Understand It with Pulse | Flag a mistake

15 Evaluate $\log_2 8$.

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **The mean of 10, 6, 14, 18 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **An arithmetic sequence starts with 1 and has common difference 5. The 8 term is**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **For $f(x) = 2x^2 + 5x + 2$, find $f(-3)$.**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **A geometric sequence starts with 2 and has common ratio 2. The 5 term is**

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **How many ways can 3 items be chosen from 8 items, where order does not matter?**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **Evaluate $3x^3$ when $x = -3$.**

ANSWER _____

Understand It with Pulse | Flag a mistake

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

A (-2, 3)

B (2, 3)

C (2, -3)

D (0, 0)

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23 In a right triangle, the side opposite an acute angle is 9, the adjacent side is 12, and the hypotenuse is 15. The cosine of the angle is

- **A** $\frac{9}{15}$
- **B** $\frac{12}{15}$
- **C** $\frac{12}{9}$
- **D** $\frac{15}{12}$

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24 The median of 14, 18, 26, 27, 29 is

- **A** 14
- **B** 29
- **C** 26
- **D** 22

Understand It with Pulse | Flag a mistake

25 The slope of the line through (-3, 2) and (-1, 8) is

- **A** $\frac{7}{2}$
- **B** 3
- **C** $\frac{2}{6}$
- **D** 6

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26 For $f(x) = -3x^2 + 0x + 2$, find $f(-2)$.

ANSWER _____

Understand It with Pulse | Flag a mistake

27 A quantity starts at 100 and doubles each hour. After 2 hours, the quantity is

ANSWER _____

Understand It with Pulse | Flag a mistake

28 **How many ways can 2 items be chosen from 5 items, where order does not matter?**

ANSWER _____

Understand It with Pulse | Flag a mistake

29 **An arithmetic sequence starts with 1 and has common difference 4. The 8 term is**

ANSWER _____

Understand It with Pulse | Flag a mistake

30 **For $f(x) = -1x^2 + 0x + 2$, find $f(3)$.**

ANSWER _____

Understand It with Pulse | Flag a mistake

31 **A geometric sequence starts with 1 and has common ratio 2. The 4 term is**

ANSWER _____

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32 **The range of 13, 18, 10, 13, 16 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

33 **Solve: x + y = 5, x - y = 3. The solution is**

A (4, 1)

B (1, 4)

C (4, -1)

D (-4, 1)

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34 Simplify $\frac{2}{6}$.

- **A** $\frac{1}{3}$
- **B** $\frac{2}{7}$
- **C** $\frac{3}{6}$
- **D** 2

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35 A geometric sequence starts with 3 and has common ratio 2. The 5 term is

ANSWER _____

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36 **A bag holds 12 marbles, of which 4 are red. The probability of NOT drawing a red marble is**

A $\frac{8}{12}$

B $\frac{4}{12}$

C $\frac{12}{4}$

D $\frac{1}{12}$

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37 **An arithmetic sequence starts with 8 and has common difference 2. The 5 term is**

ANSWER _____

Understand It with Pulse | Flag a mistake

38 **The equation $x^2 + -3x + 2 = 0$ has solutions**

- A -1 and -2
- B 1 and -2
- C 0
- D 1 and 2

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39 **In a 30-60-90 triangle, the shortest side is 5. The hypotenuse is**

- A 10
- B 12
- C 5
- D 8

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40 **The range of 22, 15, 16, 16, 25 is**

ANSWER

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41 **The slope of the line through (5, 4) and (8, 2) is**

A -1/3

B 3/-2

C -2

D -2/3

Understand It with Pulse | Flag a mistake

42 The vertex of the parabola $y = (x - -3)^2 + -1$ is

- A (3, -1)
- B (-3, 1)
- C (-3, -1)
- D (0, 0)

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43 In a 45-45-90 triangle, each leg is 7. The hypotenuse is

- A $7\sqrt{2}$
- B 14
- C $7\sqrt{3}$
- D 7

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44 **The mean of 16, 2, 4, 18 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

45 **An arithmetic sequence starts with 3 and has common difference 5. The 8 term is**

ANSWER _____

Understand It with Pulse | Flag a mistake

46 **Evaluate $2x^3$ when x = 1.**

ANSWER _____

Understand It with Pulse | Flag a mistake

47 **In a 45-45-90 triangle, each leg is 4. The hypotenuse is**

- **A** 8
- **B** $4\sqrt{3}$
- **C** $4\sqrt{2}$
- **D** 4

Understand It with Pulse | Flag a mistake

48 **How many ways can 3 items be chosen from 7 items, where order does not matter?**

ANSWER _____

Understand It with Pulse | Flag a mistake

49 **Solve: x + y = -3, x - y = 1. The solution is**

- A (-1, -2)
- B (-2, -1)
- C (-1, 2)
- D (1, -2)

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50 **Evaluate $2x^3$ when x = 2.**

ANSWER _____

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ANSWER KEY

1.	24	**18.**	5	**35.**	48
2.	C	**19.**	32	**36.**	A
3.	800	**20.**	56	**37.**	16
4.	30	**21.**	-81	**38.**	D
5.	5	**22.**	B	**39.**	A
6.	B	**23.**	B	**40.**	10
7.	8	**24.**	C	**41.**	D
8.	C	**25.**	B	**42.**	C
9.	15	**26.**	-10	**43.**	A
10.	D	**27.**	400	**44.**	10
11.	9	**28.**	10	**45.**	38
12.	20	**29.**	29	**46.**	2
13.	D	**30.**	-7	**47.**	C
14.	-2	**31.**	8	**48.**	35
15.	3	**32.**	8	**49.**	A
16.	12	**33.**	A	**50.**	16
17.	36	**34.**	A		

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