Final Exam — Practice Test

Prince Edward Island Pre-Calculus 12 • 50 questions

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 the function y = the square root of x , the value at x = 25 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **For f(x) = 3x and g(x) = x + 1 , the value of f(g(x)) at x = 2 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **An angle of 30 degrees converted to radians has a coefficient of pi equal to**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A population starts at 500 and doubles every 2 hours. After 3 doubling periods the population is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **The number of ways to arrange 3 runners in finishing order chosen from 9 runners is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **A vertical stretch does not change the**

A range

B x intercepts of the base graph in general position for a stretch about the x axis

C y intercept

D vertex height

Understand It with Pulse | Flag a mistake

7 **Composition f(g(x)) means**

A apply f first , then g

B multiply f and g

C add f and g

D apply g first , then f

Understand It with Pulse | Flag a mistake

8 **An angle in standard position with a terminal arm in quadrant 2 has a sine value that is**

A zero

B undefined

C positive

D negative

Understand It with Pulse | Flag a mistake

9 **An exponential function with a base between 0 and 1 shows**

A decay

B growth

C a straight line

D periodic behaviour

Understand It with Pulse | Flag a mistake

10 **Choosing r objects from n without regard to order uses**

A sequences

B combinations

C permutations

D arrangements

Understand It with Pulse | Flag a mistake

11 **For the function y = the absolute value of x - 4 , the value at x = 1 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

12 **Function addition is defined by adding**

A domains

B graphs side by side

C outputs at the same input

D inputs at the same output

Understand It with Pulse | Flag a mistake

13 **The cosine of 45 degrees as a decimal, rounded to four decimal places, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **Log of a quotient equals**

A the difference of the logs

B the sum of the logs

C the product of the logs

D the log of the sum

Understand It with Pulse | Flag a mistake

15 **The coefficient of x in the expansion of $(x + 2)^3$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **The graph of y = f(x) + 2 has its domain**

A doubled

B halved

C unchanged from f

D shifted up 2

Understand It with Pulse | Flag a mistake

17 **The graph of an inverse function is the reflection of the original graph in the line**

A y equals -x

B y equals x

C y equals 0

D x equals 0

Understand It with Pulse | Flag a mistake

18 **The period of cosine 3x in degrees is**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **The graph of an exponential growth function**

A increases ever more steeply

B is a straight line

C decreases to zero linearly

D oscillates

Understand It with Pulse | Flag a mistake

20 **The number of paths in a tree diagram is found by**

- A multiplying choices at each stage
- B adding all choices
- C counting only the last stage
- D subtracting repeated paths

Understand It with Pulse | Flag a mistake

21 **The point 3 comma 5 on f moves to this x coordinate under a shift right 2**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **For f(x) = 3x - 5 , the inverse function value at 10 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **A right triangle has hypotenuse 25 and one leg 7. The other leg length is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **The base 3 logarithm of 81 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **The number of subsets of a 5 element set is**

ANSWER _____

Understand It with Pulse | Flag a mistake

26 **The graph of y = f(x) - 3 is the graph of f shifted**

- A left 3 units
- B up 3 units
- C down 3 units
- D right 3 units

Understand It with Pulse | Flag a mistake

27 **For f(x) = 5x and g(x) = x + 2 , the value of f(g(x)) at x = 2 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

28 **A right triangle has hypotenuse 17 and one leg 8. The other leg length is**

ANSWER _____

Understand It with Pulse | Flag a mistake

29 **An investment of 2000 dollars at 5 percent compound annual interest for 2 years grows to this many dollars**

ANSWER _____

Understand It with Pulse | Flag a mistake

30 **The number of ways to choose a committee of 2 from 8 people, where order does not matter, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

31 **For g(x) = 2f(x) - 3 , where f(4) = 7 , the value of g at 4 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

32 **For f(x) = 2x and g(x) = x + 3 , the value of f(g(x)) at x = 4 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

33 **A right triangle has legs 6 and 8. The hypotenuse length is**

ANSWER _____

Understand It with Pulse | Flag a mistake

34 **The solution of $3^x = 27$ is x equals**

ANSWER _____

Understand It with Pulse | Flag a mistake

35 **The number of ways to choose a committee of 4 from 12 people, where order does not matter, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

36 **For $g(x) = -2f(x - 1) + 4$, where $f(x) = x^2$, the value of g at x = 3 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

37 **For f(x) = 2x + 2 and g(x) = 1x , the value of f + g at x = 5 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

38 **An angle of 120 degrees converted to radians has a coefficient of pi equal to**

ANSWER _____

Understand It with Pulse | Flag a mistake

39 **The solution of $2^x = 16$ is x equals**

ANSWER _____

Understand It with Pulse | Flag a mistake

40 **The number of ways to choose a committee of 3 from 7 people, where order does not matter, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

41 **The vertex of $y = x^2$ shifted right 2 and up 1 is at**

A 2 comma -1

B 0 comma 1

C 2 comma 1

D -2 comma 1

Understand It with Pulse | Flag a mistake

42 **The quotient $\frac{f}{g}$ is undefined where**

A f(x) = 0

B x = 0

C f = g

D g(x) = 0

Understand It with Pulse | Flag a mistake

43 **The tangent identity is**

A cosine over sine

B one over sine

C sine times cosine

D sine over cosine

Understand It with Pulse | Flag a mistake

44 **A population starts at 200 and doubles every 2 hours. After 5 doubling periods the population is**

ANSWER _____

Understand It with Pulse | Flag a mistake

45 **The value of 8 factorial divided by 6 factorial is**

ANSWER _____

Understand It with Pulse | Flag a mistake

46 **The vertex of $y = x^2 + 4x + 5$ has y coordinate**

ANSWER

Understand It with Pulse | Flag a mistake

47 **For f(x) = 1x + 2 and g(x) = 4x , the value of f + g at x = 3 is**

ANSWER

Understand It with Pulse | Flag a mistake

48 **An angle of 135 degrees converted to radians has a coefficient of pi equal to**

ANSWER

Understand It with Pulse | Flag a mistake

49 **The solution of $5^x = 25$ is x equals**

ANSWER

Understand It with Pulse | Flag a mistake

50 **The number of ways to seat 4 people in a row is**

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	5	**18.**	120	**35.**	495
2.	9	**19.**	A	**36.**	-4
3.	0.1667	**20.**	A	**37.**	17
4.	4000	**21.**	5	**38.**	0.6667
5.	504	**22.**	5	**39.**	4
6.	B	**23.**	24	**40.**	35
7.	D	**24.**	4	**41.**	C
8.	C	**25.**	32	**42.**	D
9.	A	**26.**	D	**43.**	D
10.	B	**27.**	20	**44.**	6400
11.	3	**28.**	15	**45.**	56
12.	C	**29.**	2205	**46.**	1
13.	0.7071	**30.**	28	**47.**	17
14.	A	**31.**	11	**48.**	0.75
15.	12	**32.**	14	**49.**	2
16.	C	**33.**	10	**50.**	24
17.	B	**34.**	3		

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