MANITOBA PRE-CALCULUS MATHEMATICS 30S · 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 **Two numbers add to 36 and subtract to 2. The larger number is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **Let f(x) = 4x + 5 and g(x) = 3x + 4 . The value of f(g(4)) is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **Let f(x) = 4x + 5 and g(x) = 3x + 5 . The value of f(g(4)) is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **Evaluate a x + b when a = 3 , b = 4 , and x = 2 . The result is**

ANSWER _____

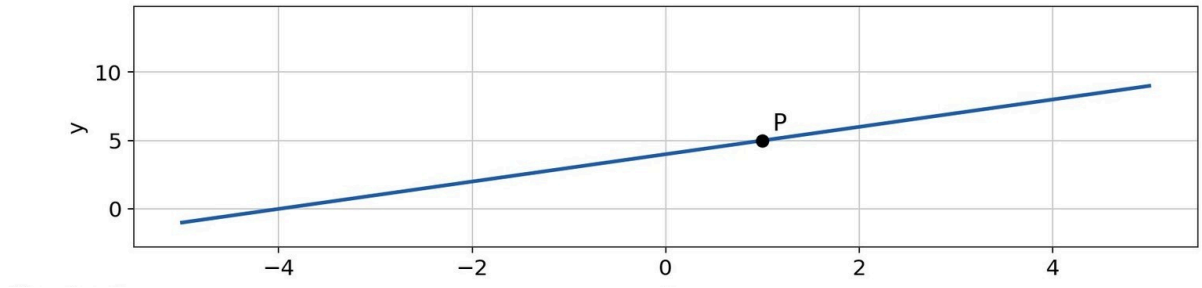
Understand It with Pulse | Flag a mistake

5 **A right triangle has legs 6 and 8. Its hypotenuse is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **The graph shows y = 1x + 4 . The value of f(1) is**



ANSWER _____

Understand It with Pulse | Flag a mistake

7 **The line that divides a parabola into two equal halves is the**

A directrix

B axis of symmetry

C asymptote

D tangent

Understand It with Pulse | Flag a mistake

8 **A triangle with no sides equal is**

- A isosceles
- B equilateral
- C scalene
- D right

Understand It with Pulse | Flag a mistake

9 **A line passes through (4, 6) and (5, 8). Its slope is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **A polygon with six sides is a**

A hexagon

B pentagon

C octagon

D decagon

Understand It with Pulse | Flag a mistake

11 **Expand the product of x plus 6 and x plus 4. The coefficient of x is**

ANSWER _____

Understand It with Pulse | Flag a mistake

12 **The highest or lowest point of a parabola is the**

A vertex

B intercept

C axis

D root

Understand It with Pulse | Flag a mistake

13 **The distance around a circle is the**

A circumference

B diameter

C radius

D area

Understand It with Pulse | Flag a mistake

14 **Two numbers add to 30 and subtract to 2. The larger number is**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **A polygon with eight sides is an**

A hexagon

B octagon

C pentagon

D decagon

Understand It with Pulse | Flag a mistake

16 **Solve for x. The value of x is 6x + 3 = 63**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **The vertex of the parabola $f(x) = 2x^2 - 12x + 3$ has x coordinate**

ANSWER

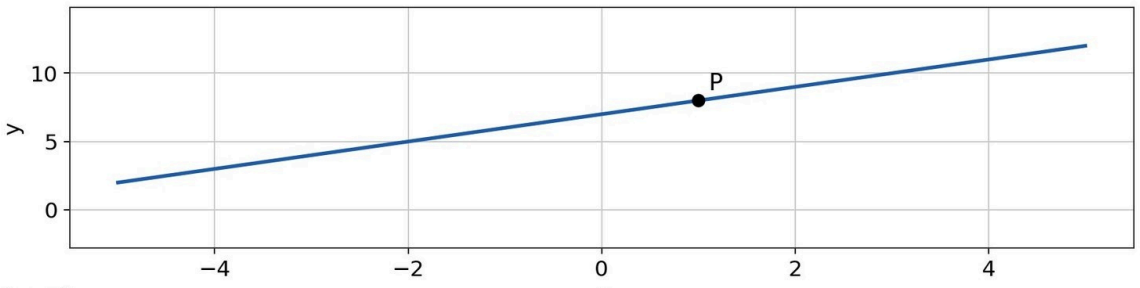
Understand It with Pulse | Flag a mistake

18 **Evaluate $f(x) = a\,x^2 + b\,x + c$ when $a = 1$, $b = 5$, $c = 1$, and $x = 4$. The result is**

ANSWER

Understand It with Pulse | Flag a mistake

19 **The graph shows $y = 1x + 7$. The value of $f(1)$ is**



ANSWER

Understand It with Pulse | Flag a mistake

20 **The longest side of a right triangle is the**

A adjacent

B opposite

C leg

D hypotenuse

Understand It with Pulse | Flag a mistake

21 **A straight line graph has a slope that is**

A increasing

B zero always

C undefined always

D constant

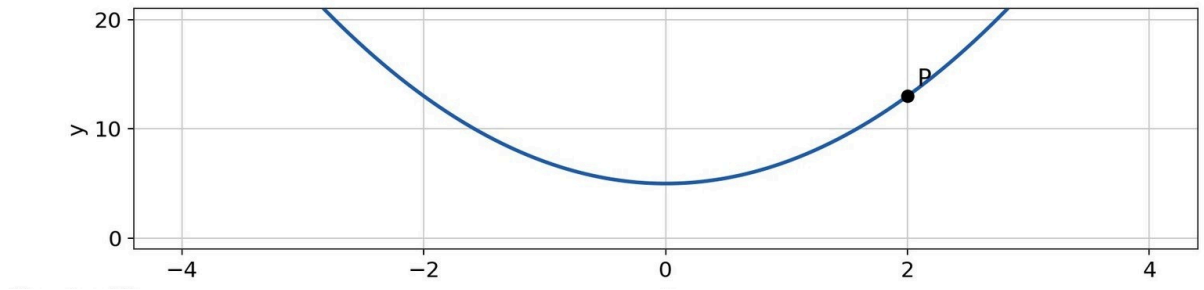
Understand It with Pulse | Flag a mistake

22 **Let f(x) = 2x + 7 . The inverse function at 17 is**

ANSWER

Understand It with Pulse | Flag a mistake

23 **The graph shows y = 2x + 5 . The value of f(2) is**



ANSWER

Understand It with Pulse | Flag a mistake

24 **A triangle with all sides equal is**

A isosceles

B scalene

C equilateral

D right

Understand It with Pulse | Flag a mistake

25 **A right triangle has hypotenuse 100 and one leg 28. The other leg is**

ANSWER _____

Understand It with Pulse | Flag a mistake

26 **Two lines that meet at a right angle are**

A parallel

B coincident

C skew

D perpendicular

Understand It with Pulse | Flag a mistake

27 **Let f(x) = 4x + 5 and g(x) = 3x + 6 . The value of f(g(4)) is**

ANSWER _____

Understand It with Pulse | Flag a mistake

28 **Let f(x) = 4x + 5 and g(x) = 3x + 2 . The value of f(g(4)) is**

ANSWER _____

Understand It with Pulse | Flag a mistake

29 **In a right triangle, the side opposite the right angle is the**

A adjacent

B opposite side

C hypotenuse

D base

Understand It with Pulse | Flag a mistake

30 **A right triangle has hypotenuse 26 and one leg 10. The other leg is**

ANSWER _____

Understand It with Pulse | Flag a mistake

31 **An arithmetic sequence starts at 3 and increases by 5 each term. Term 8 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

32 **Evaluate $f(x) = a\,x^2 + b\,x + c$ when $a = 3$, $b = 3$, $c = 7$, and $x = 3$. The result is**

ANSWER _____

Understand It with Pulse | Flag a mistake

33 **Evaluate 5×2^2. The result is**

ANSWER _____

Understand It with Pulse | Flag a mistake

34 **Expand the product of x plus 3 and x plus 7. The coefficient of x is**

ANSWER _____

Understand It with Pulse | Flag a mistake

35 **A right triangle has legs 9 and 12. Its hypotenuse is**

ANSWER _____

Understand It with Pulse | Flag a mistake

36 **Evaluate a x + b when a = 7 , b = 10 , and x = 5 . The result is**

ANSWER _____

Understand It with Pulse | Flag a mistake

37 **The vertex of the parabola $f(x) = 2x^2 - 16x + 3$ has x coordinate**

ANSWER _____

Understand It with Pulse | Flag a mistake

38 **Evaluate $f(x) = a\,x^2 + b\,x + c$ when a = 1 , b = 1 , c = 1 , and x = 2 . The result is**

ANSWER _____

Understand It with Pulse | Flag a mistake

39 **Solve for x. The value of x is 7x + 5 = 68**

ANSWER _____

Understand It with Pulse | Flag a mistake

40 **The right triangle has legs 12 and 16 as labelled. Its hypotenuse is**

ANSWER _____

Understand It with Pulse | Flag a mistake

41 **A line passes through (1, 7) and (5, 11). Its slope is**

ANSWER _____

Understand It with Pulse | Flag a mistake

42 **The slope of a vertical line is**

A zero

B one

C negative

D undefined

Understand It with Pulse | Flag a mistake

43 **The point where a graph crosses the y axis is the**

A y intercept

B x intercept

C vertex

D origin

Understand It with Pulse | Flag a mistake

44 **An arithmetic sequence starts at 6 and increases by 5 each term. Term 8 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

45 **The value of cos 60 degrees is**

ANSWER _____

Understand It with Pulse | Flag a mistake

46 **In the expression 3x plus 5, the number 3 is the**

A constant

B coefficient

C variable

D solution

Understand It with Pulse | Flag a mistake

47 **The vertex of the parabola $f(x) = 2x^2 - 20x + 3$ has x coordinate**

ANSWER _____

Understand It with Pulse | Flag a mistake

48 **Evaluate 2×2^3 . The result is**

ANSWER _____

Understand It with Pulse | Flag a mistake

49 **An angle measuring more than 90 degrees but less than 180 degrees is an**

A acute angle

B right angle

C reflex angle

D obtuse angle

Understand It with Pulse | Flag a mistake

50 **The value of sin 0 degrees is**

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	19	**18.**	37	**35.**	15
2.	69	**19.**	8	**36.**	45
3.	73	**20.**	D	**37.**	4
4.	10	**21.**	D	**38.**	7
5.	10	**22.**	5	**39.**	9
6.	5	**23.**	13	**40.**	20
7.	B	**24.**	C	**41.**	1
8.	C	**25.**	96	**42.**	D
9.	2	**26.**	D	**43.**	A
10.	A	**27.**	77	**44.**	41
11.	10	**28.**	61	**45.**	0.5
12.	A	**29.**	C	**46.**	B
13.	A	**30.**	24	**47.**	5
14.	16	**31.**	38	**48.**	16
15.	B	**32.**	43	**49.**	D
16.	10	**33.**	20	**50.**	0
17.	3	**34.**	10		

© 2026 Brett Robbins. All Rights Reserved.