MANITOBA PRE-CALCULUS MATHEMATICS 40S · 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 **A right triangle has legs 32 and 60. Its hypotenuse is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A right triangle has legs 8 and 15. Its hypotenuse is**

ANSWER _____

Understand It with Pulse | Flag a mistake

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

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **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

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

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **Two numbers add to 14 and subtract to 6. The larger number is**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **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

8 **A polygon with five sides is a**

A hexagon

B octagon

C heptagon

D pentagon

Understand It with Pulse | Flag a mistake

9 **A triangle with two sides equal is**

A equilateral

B isosceles

C scalene

D obtuse

Understand It with Pulse | Flag a mistake

10 **An angle measuring 90 degrees is a**

A acute angle

B right angle

C obtuse angle

D straight angle

Understand It with Pulse | Flag a mistake

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

A hexagon

B pentagon

C octagon

D decagon

Understand It with Pulse | Flag a mistake

12 **Solve for x. The value of x is 4x + 9 = 25**

ANSWER _____

Understand It with Pulse | Flag a mistake

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

A adjacent

B hypotenuse

C opposite

D leg

Understand It with Pulse | Flag a mistake

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

A diameter

B radius

C circumference

D area

Understand It with Pulse | Flag a mistake

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

A directrix

B asymptote

C tangent

D axis of symmetry

Understand It with Pulse | Flag a mistake

16 **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

17 **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

18 **A line passes through (2, 5) and (6, 17). Its slope is**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **A ladder reaches a wall forming a right triangle with base 12 and height 16. The ladder length is**

ANSWER

Understand It with Pulse | Flag a mistake

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

A x intercept

B vertex

C y intercept

D origin

Understand It with Pulse | Flag a mistake

21 **Let f(x) = 3x + 7 . The inverse function at 34 is**

ANSWER

Understand It with Pulse | Flag a mistake

22 **Let f(x) = 4x + 7 . The inverse function at 27 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **Evaluate f(x) = a x² + b x + c when a = 1 , b = 5 , c = 1 , and x = 4 . The result is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **Solve for x. The value of x is 3x + 18 = 51**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **A ladder reaches a wall forming a right triangle with base 10 and height 24. The ladder length is**

ANSWER _____

Understand It with Pulse | Flag a mistake

26 **The right triangle has legs 24 and 45 as labelled. Its hypotenuse is**

ANSWER _____

Understand It with Pulse | Flag a mistake

27 **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

28 **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

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

ANSWER _____

Understand It with Pulse | Flag a mistake

30 The sum of the interior angles of a quadrilateral is

- A 360 degrees
- B 180 degrees
- C 270 degrees
- D 540 degrees

Understand It with Pulse | Flag a mistake

31 The right triangle has legs 5 and 12 as labelled. Its hypotenuse is

ANSWER _____

Understand It with Pulse | Flag a mistake

32 In a right triangle with opposite 3 and hypotenuse 5, the ratio is

ANSWER _____

Understand It with Pulse | Flag a mistake

33 **Let f(x) = 5x + 9 . The inverse function at 29 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

34 **Let f(x) = 6x + 9 . The inverse function at 57 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

35 **Evaluate 3×2^2 . The result is**

ANSWER _____

Understand It with Pulse | Flag a mistake

36 **A line passes through (2, 5) and (4, 11). Its slope is**

ANSWER _____

Understand It with Pulse | Flag a mistake

37 **The right triangle has legs 28 and 96 as labelled. Its hypotenuse is**

ANSWER _____

Understand It with Pulse | Flag a mistake

38 **The right triangle has legs 10 and 24 as labelled. Its hypotenuse is**

ANSWER _____

Understand It with Pulse | Flag a mistake

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

A equilateral

B isosceles

C scalene

D right

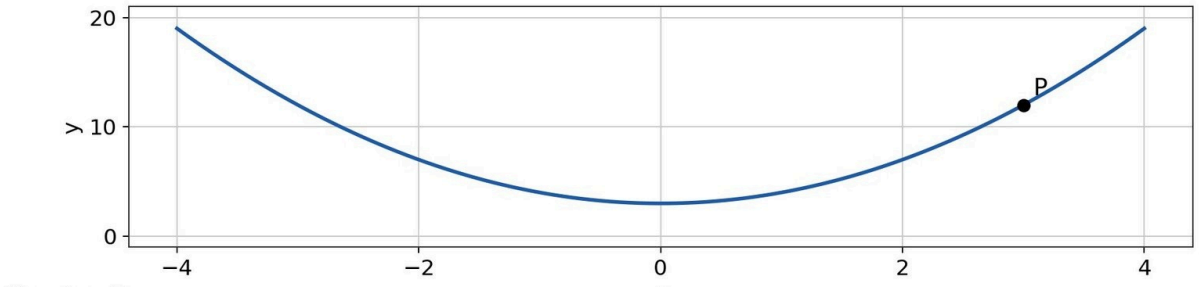
Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

41 **The graph shows y = 1x + 3 . The value of f(3) is**



ANSWER _____

Understand It with Pulse | Flag a mistake

42 **An arithmetic sequence starts at 9 and increases by 5 each term. Term 8 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

43 **In the expression 3x plus 5, the letter x is the**

A coefficient

B constant

C variable

D term

Understand It with Pulse | Flag a mistake

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

A zero

B one

C negative

D undefined

Understand It with Pulse | Flag a mistake

45 **Two lines that never meet are**

A perpendicular

B intersecting

C parallel

D coincident

Understand It with Pulse | Flag a mistake

46 **The sum of the interior angles of a triangle is**

A 90 degrees

B 270 degrees

C 360 degrees

D 180 degrees

Understand It with Pulse | Flag a mistake

47 **The value that makes an equation true is called the**

A solution

B coefficient

C variable

D expression

Understand It with Pulse | Flag a mistake

48 **Evaluate a x + b when a = 7 , b = 10 , and x = 2 . The result is**

ANSWER _____

Understand It with Pulse | Flag a mistake

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

A parallel

B coincident

C skew

D perpendicular

Understand It with Pulse | Flag a mistake

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

A hexagon

B octagon

C pentagon

D decagon

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	68	**18.**	3	**35.**	12
2.	17	**19.**	20	**36.**	3
3.	65	**20.**	C	**37.**	100
4.	61	**21.**	9	**38.**	26
5.	35	**22.**	5	**39.**	A
6.	10	**23.**	37	**40.**	A
7.	C	**24.**	11	**41.**	12
8.	D	**25.**	26	**42.**	44
9.	B	**26.**	51	**43.**	C
10.	B	**27.**	73	**44.**	D
11.	A	**28.**	69	**45.**	C
12.	4	**29.**	39	**46.**	D
13.	B	**30.**	A	**47.**	A
14.	C	**31.**	13	**48.**	24
15.	D	**32.**	0.6	**49.**	D
16.	7	**33.**	4	**50.**	B
17.	B	**34.**	8		

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