SASKATCHEWAN FOUNDATIONS OF MATHEMATICS AND PRE-CALCULUS 10 · 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 **Using pi equals 3.14, the volume of a cylinder with radius 5 cm and height 7 cm, in cm³, is approximately**

- A 549.5
- B 109.9
- C 628
- D 219.8

Understand It with Pulse | Flag a mistake

2 **A right triangle has hypotenuse 10 and an acute angle of 45 degrees. The side opposite the angle is approximately**

- **A** 7.1
- **B** 10.1
- **C** 4.1
- **D** 10

Understand It with Pulse | Flag a mistake

3 **The factored form of $x^2 + 4x + 4$ is**

- **A** $(x + 2)(x - 2)$
- **B** $(x + 2)^2$
- **C** $(x - 2)^2$
- **D** $(x + 2)(x + 3)$

Understand It with Pulse | Flag a mistake

4 **In simplest form, $\sqrt{100}$ is**

- **A** 5
- **B** 20
- **C** $2\sqrt{5}$
- **D** 10

Understand It with Pulse | Flag a mistake

5 **The slope of the line through (3, 13) and (6, 22) is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **Tickets cost 5 dollars for adults and 3 dollars for students. A group buys 1 adult tickets and 4 student tickets. The total cost, in dollars, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 A right prism has a triangular base with base 4 cm and height 6 cm, and the prism is 10 cm long. Its volume, in cm^3, is

ANSWER _____

Understand It with Pulse | Flag a mistake

8 The exact value of tan 30 degrees is

A $\frac{1}{2}$

B $\sqrt{3}/2$

C $\sqrt{3}/3$

D 1

Understand It with Pulse | Flag a mistake

9 **When expanded, $(x + 7)^2$ is**

- A $x^2 + 49$
- B $x^2 - 14x + 49$
- C $x^2 + 14x + 49$
- D $x^2 + 14x - 49$

Understand It with Pulse | Flag a mistake

10 **Using exponent laws, $x^3 \cdot x^3$ is**

- A x^9
- B x^6
- C x^0
- D x^5

Understand It with Pulse | Flag a mistake

11 The domain of the relation {(0, 2), (-2, 0), (-1, -3)} is

- A {-3, 0, 2}
- B {3, 4, 5}
- C {-2, -1}
- D {-2, -1, 0}

Understand It with Pulse | Flag a mistake

12 The solution of the system 2x + y = 7 and x - 2y = -4 is

- A (3, 2)
- B (3, 3)
- C (2, 3)
- D (2, 4)

Understand It with Pulse | Flag a mistake

13 **Using pi equals 3.14, the volume of a cone with radius 6 cm and height 12 cm, in cm³, is approximately**

A 1356.48

B 226.08

C 678.24

D 452.16

Understand It with Pulse | Flag a mistake

14 **The exact value of cos 60 degrees is**

A $\frac{1}{2}$

B $\sqrt{3}$

C $\sqrt{3}/2$

D 1

Understand It with Pulse | Flag a mistake

15 The factored form of $x^2 + 14x + 49$ is

- A $(x + 7)(x - 7)$
- B $(x - 7)^2$
- C $(x + 7)^2$
- D $(x + 7)(x + 8)$

Understand It with Pulse | Flag a mistake

16 In simplest form, $5\sqrt{3} + 4\sqrt{3}$ is

- A $9\sqrt{6}$
- B $20\sqrt{3}$
- C $9\sqrt{3}$
- D $9\sqrt{9}$

Understand It with Pulse | Flag a mistake

17 **The domain of the relation {(3, 2), (1, -1), (0, -1)} is**

A {-1, 2}

B {5, 6, 8}

C {0, 1}

D {0, 1, 3}

Understand It with Pulse | Flag a mistake

18 **Solve: 4x + 6 = 14. The value of x is**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **Using pi equals 3.14, the surface area of a sphere with radius 9 cm, in cm², is approximately**

A 1017.36

B 254.34

C 113.04

D 508.68

Understand It with Pulse | Flag a mistake

20 **A right triangle has hypotenuse 26 and an acute angle of 30 degrees. The side opposite the angle is approximately**

A 16

B 10

C 26

D 13

Understand It with Pulse | Flag a mistake

21 **The factored form of $x^2 - 64$ is**

A $(x + 8)^2$

B $(x - 8)^2$

C $(x + 8)(x - 8)$

D $(x + 8)(x + 8)$

Understand It with Pulse | Flag a mistake

22 **The value of 9^2 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 The domain of the relation {(0, -2), (2, 3), (1, -2)} is

- A {0, 1, 2}
- B {-2, 3}
- C {5, 6, 7}
- D {0, 1}

Understand It with Pulse | Flag a mistake

24 Solve: 4x + 5 = 37. The value of x is

ANSWER _____

Understand It with Pulse | Flag a mistake

25 The surface area of a rectangular prism 7 cm by 3 cm by 8 cm, in cm², is

ANSWER _____

Understand It with Pulse | Flag a mistake

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

ANSWER _____

Understand It with Pulse | Flag a mistake

27 **The greatest common factor of 77 and 36 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

28 **The value of 8^2 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

29 The domain of the relation {(3, 3), (1, 0), (0, 5)} is

- A {0, 3, 5}
- B {0, 1, 3}
- C {5, 6, 8}
- D {0, 1}

Understand It with Pulse | Flag a mistake

30 Solve: 5x + 4 = 29. The value of x is

ANSWER _____

Understand It with Pulse | Flag a mistake

31 The surface area of a rectangular prism 6 cm by 6 cm by 9 cm, in cm^2, is

ANSWER _____

Understand It with Pulse | Flag a mistake

32 **A right triangle has hypotenuse 13 and one leg 5. The other leg is**

ANSWER _____

Understand It with Pulse | Flag a mistake

33 **The factored form of $x^2 - 25$ is**

A $(x + 5)^2$

B $(x + 5)(x - 5)$

C $(x - 5)^2$

D $(x + 5)(x + 5)$

Understand It with Pulse | Flag a mistake

34 **In simplest form, $\sqrt{9}$ is**

- A 3
- B 4
- C 9
- D $\sqrt{10}$

Understand It with Pulse | Flag a mistake

35 **The domain of the relation {(0, 1), (2, -1), (-2, -2)} is**

- A {-2, 0, 2}
- B {-2, -1, 1}
- C {3, 5, 7}
- D {-2, 0}

Understand It with Pulse | Flag a mistake

36 **Solve: 2x + 2 = 14. The value of x is**

ANSWER _____

Understand It with Pulse | Flag a mistake

37 **A right prism has a triangular base with base 11 cm and height 7 cm, and the prism is 5 cm long. Its volume, in cm³, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

38 **A right triangle has hypotenuse 36 and an acute angle of 60 degrees. The side adjacent to the angle is approximately**

A 21

B 15

C 18

D 36

Understand It with Pulse | Flag a mistake

39 **The factored form of 21x + 35 is**

- A 7(3x - 5)
- B 7(3x + 5)
- C 3x(5 + 7)
- D 21(x + 5)

Understand It with Pulse | Flag a mistake

40 **Using exponent laws, $x^4 \cdot x^3$ is**

- A x^12
- B x^1
- C x^6
- D x^7

Understand It with Pulse | Flag a mistake

41 The domain of the relation {(-3, 0), (-2, 1), (-1, -1)} is

- A {-1, 0, 1}
- B {-3, -2, -1}
- C {2, 3, 4}
- D {-3, -2}

Understand It with Pulse | Flag a mistake

42 A line parallel to y = 6x + 1 has slope

- A -6
- B -1/6
- C $\frac{1}{6}$
- D 6

Understand It with Pulse | Flag a mistake

43 **Using pi equals 3.14, the volume of a cylinder with radius 4 cm and height 9 cm, in cm³, is approximately**

- A 452.16
- B 113.04
- C 502.4
- D 226.08

Understand It with Pulse | Flag a mistake

44 **A right triangle has hypotenuse 12 and an acute angle of 45 degrees. The side adjacent to the angle is approximately**

- A 8.5
- B 11.5
- C 5.5
- D 12

Understand It with Pulse | Flag a mistake

45 **When expanded, $(x + 5)(x + 6)$ is**

- **A** $x^2 + 11x - 30$
- **B** $x^2 + 11x + 30$
- **C** $x^2 + 30x + 11$
- **D** $x^2 - 11x + 30$

Understand It with Pulse | Flag a mistake

46 **In simplest form, $\sqrt{4}$ is**

- **A** 3
- **B** 2
- **C** 4
- **D** $\sqrt{5}$

Understand It with Pulse | Flag a mistake

47 **The slope of the line through (1, 4) and (5, 8) is**

ANSWER _____

Understand It with Pulse | Flag a mistake

48 **Solve: 5x + 2 = 17. The value of x is**

ANSWER _____

Understand It with Pulse | Flag a mistake

49 **A right prism has a triangular base with base 5 cm and height 4 cm, and the prism is 6 cm long. Its volume, in cm³, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

50 **A right triangle has an adjacent side of 24 and an acute angle of 30 degrees. The side opposite the angle is approximately**

A 16.9

B 13.9

C 10.9

D 24

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	A	**18.**	2	**35.**	A
2.	A	**19.**	A	**36.**	6
3.	B	**20.**	D	**37.**	192.5
4.	D	**21.**	C	**38.**	C
5.	3	**22.**	81	**39.**	B
6.	17	**23.**	A	**40.**	D
7.	120	**24.**	8	**41.**	B
8.	C	**25.**	202	**42.**	D
9.	C	**26.**	15	**43.**	A
10.	B	**27.**	1	**44.**	A
11.	D	**28.**	64	**45.**	B
12.	C	**29.**	B	**46.**	B
13.	D	**30.**	5	**47.**	1
14.	A	**31.**	288	**48.**	3
15.	C	**32.**	12	**49.**	60
16.	C	**33.**	B	**50.**	B
17.	D	**34.**	A		

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