SASKATCHEWAN FOUNDATIONS OF MATHEMATICS 30 · 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 **An investment of 4000 dollars grows by 20 percent in one year. Its value after one year, in dollars, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **Set A has 13 elements, set B has 18 elements, and 7 elements are in both. The number in A or B is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **Two mutually exclusive events have probabilities 1/6 and 1/3. The probability one or the other occurs is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A polynomial of degree 2 has leading coefficient 1. As x gets larger and larger, the function**

- A decreases without bound
- B increases without bound
- C approaches 0
- D approaches a constant

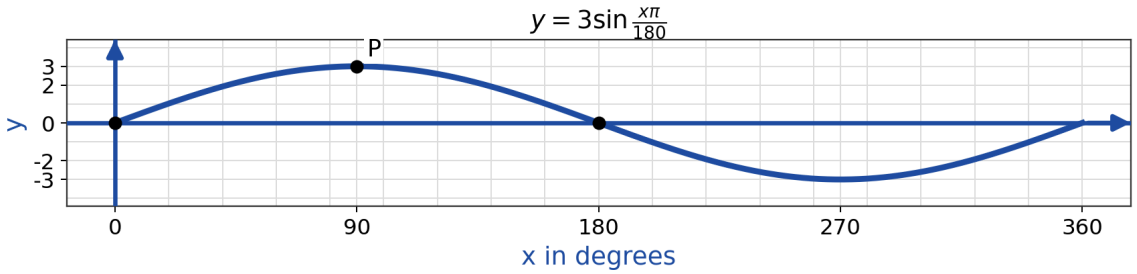
Understand It with Pulse | Flag a mistake

5 **A sample of 200 g has a half-life of 1 hour. After 1 hours, the mass remaining, in grams, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

**6** **The graph shows y = 3sin x . The value of y when x = 90 degrees is**




ANSWER

Understand It with Pulse | Flag a mistake

**7** **Simple interest on 3000 dollars at 6 percent per year for 3 years, in dollars, is**

ANSWER

Understand It with Pulse | Flag a mistake

**8** **Set A has 19 elements, set B has 26 elements, and 6 elements are in both. The number in A or B is**

ANSWER

Understand It with Pulse | Flag a mistake

9 **The number of ways to arrange 9 different books in a row is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **A polynomial function of degree 2 has at most how many turning points**

ANSWER _____

Understand It with Pulse | Flag a mistake

11 **Solve : $2^x = 256$ . The value of x is**

ANSWER _____

Understand It with Pulse | Flag a mistake

**12** The function $y = 3 \sin x + 4$ has midline $y$ equals

A 3

B 4

C -4

D 0

Understand It with Pulse | Flag a mistake

**13** A car costs 20000 dollars with a down payment of 2000 dollars. The amount financed, in dollars, is

ANSWER _____

Understand It with Pulse | Flag a mistake

**14** A universal set has 30 elements and set A has 9 elements. The number of elements in the complement of A is

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **The number of permutations of 10 objects taken 3 at a time is**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **A polynomial of degree 4 has leading coefficient 1. As x gets larger and larger, the function**

A decreases without bound

B approaches 0

C approaches a constant

D increases without bound

Understand It with Pulse | Flag a mistake

17 **The value of log base 10 of 100 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **The function y = 3sin x has amplitude**

A 4

B 6

C 3

D 1

Understand It with Pulse | Flag a mistake

19 **Simple interest on 1000 dollars at 6 percent per year for 4 years, in dollars, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **For two sets, the part in A but not in B contains 7 elements, and the part in both contains 3. The number in A is**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **Five runners finish a race with no ties. The number of possible orders for the first three places is**

ANSWER

Understand It with Pulse | Flag a mistake

22 **A polynomial of degree 3 has leading coefficient 1. As x gets larger and larger, the function**

A increases without bound

B decreases without bound

C approaches 0

D approaches a constant

Understand It with Pulse | Flag a mistake

**23** **Using logarithm laws, log 3 plus log 4 equals**

- A log 7
- B log -1
- C log 81
- D log 12

Understand It with Pulse | Flag a mistake

**24** **A sinusoidal function has amplitude 2 and midline y = 1 . Its maximum value is**

ANSWER _____

Understand It with Pulse | Flag a mistake

**25** **Simple interest on 3000 dollars at 4 percent per year for 4 years, in dollars, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

**26** **The complement of the set of even numbers, inside the integers, is the set of**

A prime numbers

B odd numbers

C multiples of 4

D negative numbers

Understand It with Pulse | Flag a mistake

**27** **From a deck, the number of different 2 card hands is**

ANSWER _____

Understand It with Pulse | Flag a mistake

**28** **The function y = (x - 3)(x + 3) has x-intercepts. The positive intercept is**

ANSWER _____

Understand It with Pulse | Flag a mistake

29 **The value of log base 2 of 16 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

30 **A sinusoidal function has amplitude 4 and midline y = -2 . Its maximum value is**

ANSWER _____

Understand It with Pulse | Flag a mistake

31 **Using the rule of 72, an investment at 18 percent per year doubles in about how many years**

ANSWER _____

Understand It with Pulse | Flag a mistake

**32** **Two sets are equal when they have**

- A the same elements
- B the same number of elements only
- C no elements in common
- D one element each

Understand It with Pulse | Flag a mistake

**33** **The number of combinations of 8 objects taken 2 at a time is**

ANSWER _____

Understand It with Pulse | Flag a mistake

**34** **A polynomial has a factor x minus (-4). One zero of the polynomial is**

ANSWER _____

Understand It with Pulse | Flag a mistake

35 **Solve : $2^x = 8$ . The value of x is**

ANSWER

Understand It with Pulse | Flag a mistake

36 **A sinusoidal function has amplitude 3 and midline y = -1 . Its minimum value is**

ANSWER

Understand It with Pulse | Flag a mistake

37 **A car costs 15000 dollars with a down payment of 3000 dollars. The amount financed, in dollars, is**

ANSWER

Understand It with Pulse | Flag a mistake

38 **A universal set has 40 elements and set A has 8 elements. The number of elements in the complement of A is**

ANSWER

Understand It with Pulse | Flag a mistake

39 **The number of combinations of 8 objects taken 4 at a time is**

ANSWER _____

Understand It with Pulse | Flag a mistake

40 **A polynomial has a factor x minus 5. One zero of the polynomial is**

ANSWER _____

Understand It with Pulse | Flag a mistake

41 **The value of log base 10 of 1000 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

**42** The function y = 3 sin x + 2 has midline y equals

- A 3
- B 2
- C -2
- D 0

Understand It with Pulse | Flag a mistake

**43** A car costs 25000 dollars with a down payment of 3000 dollars. The amount financed, in dollars, is

ANSWER _____

Understand It with Pulse | Flag a mistake

**44** Set A has 25 elements, set B has 18 elements, and 3 elements are in both. The number in A or B is

ANSWER _____

Understand It with Pulse | Flag a mistake

45 **The number of permutations of 7 objects taken 2 at a time is**

ANSWER

Understand It with Pulse | Flag a mistake

46 **A polynomial has a factor x minus 3. One zero of the polynomial is**

ANSWER

Understand It with Pulse | Flag a mistake

47 **A population of 80 doubles every year. After 4 years, the population is**

ANSWER

Understand It with Pulse | Flag a mistake

48 **A sinusoidal function has amplitude 5 and midline y = -1 . Its minimum value is**

ANSWER

Understand It with Pulse | Flag a mistake

49 **Using the rule of 72, an investment at 12 percent per year doubles in about how many years**

ANSWER

Understand It with Pulse | Flag a mistake

50 **A universal set has 37 elements and set A has 15 elements. The number of elements in the complement of A is**

ANSWER

Understand It with Pulse | Flag a mistake

# ANSWER KEY

| | | | | | |
|---|---|---|---|---|---|
| **1.** | 4800 | **18.** | C | **35.** | 3 |
| **2.** | 24 | **19.** | 240 | **36.** | -4 |
| **3.** | 0.5 | **20.** | 10 | **37.** | 12000 |
| **4.** | B | **21.** | 60 | **38.** | 32 |
| **5.** | 100 | **22.** | A | **39.** | 70 |
| **6.** | 3 | **23.** | D | **40.** | 5 |
| **7.** | 540 | **24.** | 3 | **41.** | 3 |
| **8.** | 39 | **25.** | 480 | **42.** | B |
| **9.** | 362880 | **26.** | B | **43.** | 22000 |
| **10.** | 1 | **27.** | 1326 | **44.** | 40 |
| **11.** | 8 | **28.** | 3 | **45.** | 42 |
| **12.** | B | **29.** | 4 | **46.** | 3 |
| **13.** | 18000 | **30.** | 2 | **47.** | 1280 |
| **14.** | 21 | **31.** | 4 | **48.** | -6 |
| **15.** | 720 | **32.** | A | **49.** | 6 |
| **16.** | D | **33.** | 28 | **50.** | 22 |
| **17.** | 2 | **34.** | -4 | | |

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