ⓘ Students have either already taken or started taking this quiz, so take care when editing it. If you change any quiz questions in a significant way, you might want to consider re-grading students' quizzes who took the old version of the quiz.

Points 100 Published

Details Questions

Show question details

Group 1

Group Name Pick 4 questions, 5 pts per question Pick questions, pts per question

Cancel Update

Question 1 pts

If A and B are two sets, what does A × B represent?

Correct answer

- Cartesian product of sets A and B
- Union of sets A and B
- Intersection of sets A and B
- Complement of set A with respect to set B

Question 1 pts

Which of the following notations is commonly used to represent a function f that maps elements from set A to set B?

a) $f : A \to B$
b) $f \subseteq A \times B$
c) $f \in A \times B$
d) $f : A \times B$

Correct answer

- a
- b
- c
- d

Question 1 pts

What is the cardinality of the power set of a set with n elements?

a) n
b) 2^n
c) $n!$
d) n^2

Correct answer

- b
- a
- c
- d

Question 1 pts

Which of the following sets of order pairs does not represent a function?

Correct answer

- (1,2), (1,4), (2,5), (3,8)
- (1,1), (2,2), (3,3)
- (-1,1), (-2,4), (2,4)
- (1,2), (2,4), (3,6)

Question 1 pts

What does the ”domain” of a function represent?

Correct answer

- The set of all possible inputs.
- The set of all possible outputs.
- The set of ordered pairs.
- The set of ordered pairs.

Question 1 pts

Consider the function f(x) = |x|. What is f(−3)?

Correct answer

- 3
- -3
- Undefined
- 0

Question 1 pts

Which of the following sets is a subset of every set?

Correct answer

- Empty set
- Universal set
- Singleton set
- Power set

Question 1 pts

Which of the following terms is synonymous with a one-to-one function?

Correct answer

- Injective function
- Surjective function
- Bijective function
- Polynomial function

Group 2

Group Name Pick 6 questions, 10 pts per question Pick ☐ questions, ☐ pts per question

Cancel Update

Question 1 pts

Which of the following set identities represents the distributive law?

a) $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$

b) $A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$

c) $A \cap (B \cup C) = (A \cup B) \cap (A \cup C)$

d) $A \cup (B \cap C) = (A \cap B) \cup (A \cap C)$

Correct answer

- a
- b
- c
- d

Question 1 pts

Which of the following statements is true regarding the complement of a set?

a) $A \cap A' = A$

b) $A \cup A' = A$

c) $A' \cap A = \emptyset$

d) $A' \cup A = \emptyset$

Correct answer

- c
- b
- a

d

Question 1 pts

If A and B are disjoint sets, what is $A \cap B$?

a) A
b) B
c) $\emptyset$
d) $A \cup B$

Correct answer

c
a
b
d

Question 1 pts

If the square root of x is cube root of y what is the relation between x and y ?

(a) $x^3 = y^2$
(b) $x = y$
(c) $x^6 = y^5$
(d) $x^2 = y^3$

Correct answer

a
b
c
d

Question 1 pts

Which of the following functions is even?

a) $f(x) = x^2 + x$
b) $f(x) = x^3 - x$
c) $f(x) = \sin(x)$
d) $f(x) = \cos(x)$

Correct answer

- d
- a
- b
- c

Question 1 pts

What is the modulus of the complex number 5 − 12i?

Correct answer

- 13
- 12
- 17
- 5

Question 1 pts

How many functions are possible from the set {1, 2} to the set {a, b, c}?

Correct answer

- 9
- 6
- 8
- 12

Question 1 pts

f:N→N, given by f(x)=2x then which of the following answers is correct for f?

Correct answer

- one to one but not onto function
- one to one and onto function
- many to one and onto function
- many to one but not onto function

Question 1 pts

Let $f(x) = 2x - 3$ be a function. What is the inverse of $f(x)$?

a) $f^{-1}(x) = \frac{x+3}{2}$
b) $f^{-1}(x) = \frac{x-3}{2}$
c) $f^{-1}(x) = \frac{2}{x} - 3$
d) $f^{-1}(x) = \frac{x}{2} - 3$

Correct answer

- a
- b
- c
- d

Question 1 pts

f:R→R, given by f(x)=2x then which of the following answers is correct for f?

Correct answer

- One to one and onto function
- one to one but not onto function
- many to one and onto function
- many to one but not onto function

Group 2

Group Name Pick 1 questions, 20 pts per question Pick □ questions, □ pts per question

Cancel Update

Question 1 pts

The inverse function of f(x)=log(x-2) is?

Correct answer

- e^x +2
- log(x+2)
- e^x-2
- log(x-2)

Question 1 pts

The inverse function of f(x)=(3x+2)/(x-1) is?

Correct answer

- (x+2)/(x-3)
- (x-2)/(x+3)
- (x+3)/(x-2)
- (x-3)/(x+2)

Question 1 pts

Given $f(x)$=3x−1 and $g(x)$=x^2 +1, find $(f \circ g)(2)$.

Correct answer

- 14
- 19
- 12
- 9

+ New question + New question group Find questions

Notify users this quiz has changed

Cancel Save