

MATH

In probability, the set of all possible outcomes is called _____.

- A. sample events
- B. simple event
- C. sample space
- D. samples

Ans: sample space

The difference between the sum of face angles at a polyhedron vertex of a polyhedron and 2π radians.

- A. Spherical Defect
- B. Jump Angle
- C. Angular Defect
- D. Trihedral Angle

Ans: Angular Defect

The _____ results from activity that has not been recorded through the tax system or other conventional means of recording.

- A. Backdoor Economy
- B. Illegal Economy
- C. Black Economy
- D. White Economy

Ans: Black Economy

Which is not a Werner Formula?

- A. $2\sin A \cos B = \sin(A - B) + \sin(A + B)$
- B. $2\cos A \cos B = \cos(A - B) + \cos(A + B)$
- C. $2\cos A \sin B = \sin(A + B) - \sin(A - B)$
- D. $2\sin A \sin B = \cos(A + B) - \cos(A - B)$

Ans: $2\sin A \sin B = \cos(A + B) - \cos(A - B)$

At what situation when the colliding objects stops and the target moves off with the same speed after collision?

- A. When their masses are equal to the target is stationary
- B. When the target is stationary even if their masses are not equal
- C. When their masses are equal and the target is moving with a speed less than that of the colliding body
- D. When their masses are equal and the target is moving with a speed greater than that of the colliding body

Ans: When their masses are equal to the target is stationary

The laminar friction factor of fluid flowing through a pipe is a function of all of the following except :

- A. fluid velocity
- B. pipe diameter
- C. pipe roughness
- D. Reynolds number

Ans: pipe roughness

A/An _____ of a circle is the portion enclosed between a chord and its arc.

- A. segment
- B. secant
- C. sector
- D. lune

Ans: segment

"Every positive integer greater than 1 is a prime or can be expressed as a unique product of primes and powers". This is known as:

- A. Fundamental theorem of arithmetic
- B. Pseudo prime theorem
- C. Prime number theorem
- D. Mersenne's Theorem

Ans: Fundamental theorem of arithmetic

In the equation $5 + 2 = 7$, 5 is known as:

- A. augend
- B. dividend
- C. minuend
- D. addend

Ans: augend

A sequence of numbers where the succeeding term is greater than the preceding term is called:

- A. dissonant series
- B. divergent series
- C. convergent series
- D. isometric series

Ans: divergent series

The reward for bearing uninsurable risks associated with production.

- A. price
- B. profit
- C. discount

D. tax

Ans: profit

Branch of mechanics which deals with bodies in motion.

A. Statics

B. Dynamics

C. Kinetics

D. Kinematics

Ans: Dynamics

The behavior of an individual consumer, firm, and industry.

A. Megaeconomics

B. Nanoeconomics

C. Microeconomics

D. Macroeconomics

Ans: Microeconomics

Number of years to recover the initial investment and a stated rate of return.

A. Payback period

B. Life-cycle

C. Capital recovery

D. Recovery period

Ans: Payback period

The _____ is the inscribed circle of a triangle.

A. extended circle

B. incircle

C. excircle

D. circumcircle

Ans: incircle

All of the following dimensionless parameters are applicable to fluid flow problems except the _____

A. Reynolds number

B. Froude number

C. Mach number

D. Biot number

Ans: Biot number

A polygon representing 257, a Fermat prime.

- A. all of these
- B. two-hundredth heptagon
- C. 257-gon
- D. Fermagon

Ans: 257-gon

An angle $2\pi = 360$ degrees corresponding to the central angle of an entire circle.

- A. straight angle
- B. myriagon
- C. perigon
- D. polygon

Ans: perigon

What is measured by a Pitot tube?

- A. Volumetric discharge
- B. Mass flow
- C. Pressure
- D. Velocity

Ans: Velocity

It is the amount the property would sell for if disposed off as junk.

- A. Fair value
- B. Book value
- C. Salvage value
- D. Scrap value

Ans: Scrap value

Alcohol finds use in manometers as :

- A. it provides a suitable meniscus for the inclined tube
- B. its density being less can provide longer length for a pressure difference, thus more accuracy can be obtained
- C. A and B above are correct
- D. Cheap and easily available

Ans: A and B above are correct

The point of concurrence of the three altitudes of a cyclic quadrilateral.

- A. Anticenter
- B. Orthocenter

- C. Cevian point
- D. Cleavance point

Ans: Anticenter

Two cones placed apex-to-apex.

- A. sphericon
- B. nappe
- C. double cone
- D. bicone

Ans: double cone

A number which cannot be a root of an integral rational equation is called:

- A. transcendental number
- B. irrational number
- C. Euler's number
- D. natural number

Ans: transcendental number

From the Latin 'logarithmus dualis', log base 2 is denoted as

- A. lgn
- B. log
- C. lg
- D. ln

Ans: lg

It is a triple of positive integers a, b, and c such that a right triangle exists with legs a, b and c (3,4,5 is the smallest known triple).

- A. Triangle Tiling
- B. Trisectrix
- C. Pythagorean Triple
- D. All of these

Ans: Pythagorean Triple

What do you call the pressure which the fluid exerts on an immersed object or container walls?

- A. Normal pressure
- B. Standard liquid pressure
- C. Hydrostatic pressure
- D. Gage pressure

Ans: Hydrostatic pressure

A _____ is a quadrilateral ABCD that has AC for an axis of symmetry.

- A. Rectangle
- B. Lozenge
- C. Kite
- D. Strombus

Ans: Strombus

It is the branch of mathematics that studies the possible outcomes of given events together with their relative likelihoods and distributions.

- A. Number Theory
- B. Probability
- C. Statistics
- D. Game Theory

Ans: Probability

A line which is perpendicular to the x-axis has slope equal to

- A. zero
- B. one
- C. infinity
- D. either zero or infinity

Ans: infinity

Manila has a longitude of 121deg 05'E. What is the time difference between Manila and Greenwich, England which is at prime meridian?

- A. 8 hours and 40 minutes
- B. 8 hours and 14 minutes
- C. 8 hours and 34 minutes
- D. 8 hours and 4 minutes

Ans: 8 hours and 4 minutes

Indicate the false statement about work.

- A. Work = force x distance
- B. The unit of work in the SI system is joules and erg in the English system
- C. Work is a scalar quantity.
- D. Work = power x time

Ans: The unit of work in the SI system is joules and erg in the English system