3
D. 6
B. 12
A. 13
Possible value of \(a + b + c\) is 3 when \(x = 0\) and \(4x + 12x + 5 = 0\). Hence, the least possible value is 3.

4
If \(a, b, c\) are positive real numbers such that the lines
\[ \frac{x + 1}{a} = \frac{y}{b} = \frac{z}{c} \]
and
\[ \frac{y - 1}{b} = \frac{z + 1}{c} \]
are parallel, then the least possible value of \(|a + b + c|^2\) is 8.

3
A. \(\sqrt{3}\)
B. 2
C. 1
D. 1 + \sqrt{3}
Let \(a\) be a cube root of unity not equal to 1. Then the maximum possible value of \(|a + b + c|^2\) is 3.

2
A. 4 and 16
B. 5 and 17
C. 4 and 17
D. 4 and 16
Let \(a\) be the number of digits in the binary expansion of \(n\).

1
D. \(x = \sqrt{3} + 2\)
A. \(x = \sqrt{3} - 2\)
B. \(x = \sqrt{3} + 2\)
C. \(x = \sqrt{3} - 2\)
The sum of non-real roots of the polynomial equation

\[ x^3 + \sqrt{3}x^2 + 3x + \sqrt{3} = 0 \]

MATHMATICS

(Part-1 (1 Mark))
Let $\int_0^1 f(x)\,dx = 1$. Which of the following statements are true?

Coeficients of quadratic polynomials in $x$ with variables $z = x^2 - x$ and $\sin(x)$ are $f(x)$.

For $x \in \mathbb{R}$, let

\[
0 = f(x) - \lim_{x \to 0} f(x).
\]

\[
W = f(x)\sin(x) - (f(x))\sin(x)
\]

\[
W = (x)f(x) \quad \text{and} \quad \lim_{x \to \infty} W = 0.
\]

Then which of the following is false?

Let $f$ be a function such that $\lim_{x \to \infty} f(x) = 0$. Then $W = f(x) - \lim_{x \to \infty} f(x)$. If $\exists x \in \mathbb{R}$ such that $\forall x \in \mathbb{R}$, then $f(x) = 0$.

For all $x \in \mathbb{R}$, let

\[
0 = f(x) - \lim_{x \to 0} f(x).
\]

\[
W = f(x)\sin(x) - (f(x))\sin(x)
\]

\[
W = (x)f(x) \quad \text{and} \quad \lim_{x \to \infty} W = 0.
\]

The angle $\alpha$, $\beta$, $\gamma$, and $\delta$ of a triangle satisfy the equations

\[
2\sin \alpha + 3\cos \alpha = 1.
\]

Then $\delta = q$, where $q$ is an angle in the interval $[0, \pi]$. Which of the following equations holds?

Let $\Delta ABC$ be an acute-angled triangle and let $D$ be the midpoint of $BC$. If $AB = AD$, then $\tan(\angle C)$ equals

\[
\frac{\sin \gamma - \sin \beta}{\cos \gamma - \cos \beta}
\]

Consider a triangle $\Delta ABC$ in the $xy$-plane with vertices

\[
A = (4, 0, 0), \quad B = (0, 4, 0), \quad C = (0, 0, 4).
\]

Two line segments $AB$ and $CD$ are perpendicular to each other.

The points $A$, $B$, $C$, and $D$ are concyclic. If $AB = CD$, then the locus of the center of the circle passing through $A$, $B$, $C$, and $D$ is a certain curve in space.
If no or may not be equal to
$$\varphi = \varphi \quad \text{C.}$$
$$\varphi > \varphi \quad \text{B.}$$
$$\varphi \leq \varphi \quad \text{A.}$$


A new list of numbers is and standard deviation o. A new list of numbers is.

Let $u > 3$. Then the number of 0's > $x > \ldots > x > x > x$. This means

$$\left[ \frac{x}{u} \right] \left[ \frac{x}{u} \right] \left[ \frac{x}{u} \right] \left[ \frac{x}{u} \right] \left[ \frac{x}{u} \right] \left[ \frac{x}{u} \right]$$

D. $90$
B. $64$
A. $63$

The integer value of $n$ for which $\int [x] \cdot [x] \cdot [x] \cdot [x] \cdot [x] \cdot [x] \cdot [x] \cdot [x] \cdot [x]$ exceeds 2013 is.

When $a$ is equal to $x$ and $[x] = x - x$. The smallest possible

For a real number $x$, let $[x]$ denote the largest integer less

D. $19$
B. $18$
A. $10$

The discontinuity of $f$ in the interval $(-0.10, 0.10)$ is.

Where for a real number $x$, we denote by $\lfloor \varphi \rfloor$ the largest

For real $x$ with $-10 < x > 0$, define $f(x)$.
Consider an infinitely neutral hollow conducting spherical shell. The magnitude of the force on a test charge placed at point $P$ will be the electric field at $P$. The figure shows the electric field lines emanating from the point charge. The electric field is shown in the figure.

**Physics**
The circuit shown in the figure below:

\[ R = \frac{q}{2c} \left( \frac{zA}{\partial t} + \frac{d}{\partial t} \right) \]

approximated by the equation:

\[ R = \frac{q}{2c} \left( \frac{zA}{\partial t} \right) \]

The equation of state of a mixture of a non-ideal gas can be

\[ A_{\text{resistor and inductor in parallel}} \]
\[ A_{\text{resistor and capacitor in parallel}} \]
\[ A_{\text{resistor and inductor in series}} \]
\[ A_{\text{resistor and capacitor in series}} \]

From this we can infer that the blackbox contains

Figure (q) shows the current as a function of time.

\[ \varphi = \left( 1 + \frac{Z}{2A} \right) \]
28. An arrangement with a part of quarter circular coils of
radius $r$ and a with a common centre $C$ and carrying a
current $I$ is shown.

The permeability of free space is $\mu_0$. The magnetic field
through the path $\mathcal{C}$ is:

A. $\mu_0 \frac{g}{R} \left(\frac{1}{1} - \frac{1}{1}\right)$
B. $\mu_0 \frac{g}{R} \left(\frac{1}{1} - \frac{1}{1}\right)$
C. $\mu_0 \frac{g}{R} \left(\frac{1}{1} + \frac{1}{1}\right)$
D. $\mu_0 \frac{g}{R} \left(\frac{1}{1} - \frac{1}{1}\right)$

29. The circuit shown has been connected for a long time. The
voltage across the capacitor is

A. 4.0 V
B. 2.0 V
C. 2.4 V
D. 4.0 V

30. An engine moving away from a vertical cliff shows a horn at
an engine moving away from a vertical cliff shows a horn at
a frequency $f$. Its speed is 0.50% of the speed of sound in air.
The frequency $f$ is:

A. $6.0 \times 10^3$ Hz
B. $6.0 \times 10^3$ Hz
C. $6.0 \times 10^3$ Hz
D. $6.0 \times 10^3$ Hz

31. The values of photon's frequency and the work function as
determined from the graph are (taking the magnitude of
the ratio of photon's frequency to be $6 \times 10^{-10}$):

C. 1.005
B. 0.995
A. 0.995

The following graph shows experimentally measured values of
the maximum kinetic energy of the photoelectrons. The
stopping potential versus frequency of incident light is

In a photoelectric circuit the stopping potential $V_s$ is a measure
of...
During its motion inside the chamber, the speed of the electron increases at a uniform rate.

Field is present as shown. Ignore gravity. An electron enters a chamber in which a uniform magnetic field is present as shown. Label the answer.

Protons with maximum energies are n and p. Protons with minimum de Broglie wavelengths of the emitted with work functions 6 eV and 3 eV respectively. The dimensions of the area, and are incident on two metals A and B respectively, where k is the incident wave.

The bulk modulus of a gas is defined as where AP/PA - P. For an ideal gas, n is zero.

Two species of radioactive atoms are mixed in equal number. The distribution constant of the first species is a number. After a long time the mixture will behave as a species with mean life of approximately 0.524 and the second is 0.004. What is the number of atoms of the first species if the number of atoms of the second species is 2.5 x 10^24?

The magnitude of the net torque acting on the system is nearly zero.
17

The forever escape will never escape.

- D. 4 m/s
- C. 2 m/s
- B. 2 m/s
- A. 2 m/s

39

A point particle of mass 0.5 kg is moving along the x-axis. Its position is given by x(t) = t^2. The acceleration of the particle is given by a(t) = 2t. What is the force acting on the particle?

- D. 100 cm
- C. 100 m
- A. 100 mm

38

The average distance between molecules of an ideal gas at STP is approximately the order of

- D. 100 nm
- C. 100 μm
- A. 100 mm

37

A plank is resting on a horizontal ground in the northern hemisphere of the Earth at a 45° latitude. Let the angular speed of the Earth be \( \omega \) and its radius \( r \). The magnitude of the frictional force on the plank will be

- D. \( \frac{2}{3} r \omega^2 \)
- C. \( \frac{1}{3} r \omega^2 \)
- B. \( \frac{2}{3} r \omega^2 \)
- A. \( \frac{1}{3} r \omega^2 \)

36

Young-Laplace law states that the excess pressure inside a soap bubble of radius \( R \) is given by \( P = \frac{\gamma}{2r} \) where \( \gamma \) is the surface tension of the soap. The excess pressure inside a soap bubble of radius \( R = 50 \) cm is

- D. 60°
- C. 45°
- B. 30°
- A. 15°
A. CH₄COONH₄B. CH₃COONH₄C. CH₃CONH₂D. CH₃CONH₂⁺

*Which of the following react with NH₂NH₂ to form

A. 1,3-cyclohexadiene B. 1,2-cyclohexadiene, C. cyclohexanone D. cyclohexanone

A. 1,6-aminohexane B. 1,2-aminohexane

42. Which of the following compounds will react with excess bromine to give a product of 2,4,6-trimethylphenol?

A. K₂CO₃ B. K₂O C. K₂O₂ D. K₂O₃

43. For a zero-order reaction with rate constant k, the slope of the plot of concentration against time is:

A. \( \frac{1}{[A]} \) B. \( kt \) C. \( \frac{1}{k} \) D. \( k \cdot t \)

44. Among the following, the set of isoelectronic ions is:

A. \( \text{N}^2-, \text{N}^3-, \text{S}^-, \text{C}^- \) B. \( \text{N}^-, \text{N}^+, \text{S}^+, \text{C}^+ \)

45. Chemistry

46. Wave I has a shorter wavelength and smaller amplitude compared to wave 2. Which of the following statements is true?

A. Wave 1 has higher frequency and greater amplitude B. Wave 1 has lower frequency and smaller amplitude C. Wave 1 has shorter wavelength and greater amplitude D. Wave 2 has shorter wavelength and smaller amplitude

47. The figure below shows pressure variation in two different sound waves at a given time at a given position. Both the sound waves in air with a different wavelength. Both the sound waves are drawn to the same scale.
47. The reaction of ethyl mercaptan with Cl₂ in excess OH⁻ gives the following major product:

- A. C₂H₅OHCl₂
- B. C₂H₅Cl₂
- C. C₂H₅ClCl₂
- D. C₂H₅Cl₂Cl

48. The compound that readily ionizes is:

- A. CH₃COOH₃CH₃
- B. CH₃COOH₂CH₂
- C. CH₃COOHCH₂CH₃
- D. CH₃COOCH₂CH₃

49. The hydrolysis of BCl₃ gives X when treated with sodium carbonate produces X and Y, respectively. Are the following products X and Y, respectively?

- A. B₂O₅ and Na₂B₄O₇
- B. H₂BO₃ and Na₂B₄O₇
- C. B₂O₅ and Na₂B₄O₇
- D. B₂O₅ and Na₂B₄O₇

50. The numbers of lone pairs on Xe in XeF₂ and XeF₄ are:

- A. 2 and 4
- B. 2 and 3
- C. 3 and 2
- D. 4 and 2

51. The entropy change in the isothermal reversible expansion of 2 moles of an ideal gas from 10 to 100 L at 300 K is:

- A. 32.2 J/K
- B. 35.8 J/K
- C. 38.2 J/K
- D. 32.3 J/K

52. The reaction of ethyl mercaptan with Cl₂ in excess OH⁻ gives the following major product:

- A. C₂H₅OHCl₂
- B. C₂H₅Cl₂
- C. C₂H₅ClCl₂
- D. C₂H₅Cl₂Cl

53. The gaseous phase of Henry's law constant is:

- A. G₃
- B. G₂
- C. G₁
- D. G₄

54. The variation of solubility of four different gases (G₁, G₂, G₃, G₄) at a given solvent with pressure at a constant temperature is shown in the plot.
D. 60°
B. 45°
A. 15°

Diffracted beam from the (200) plane is a first-order whose angle of incidence is 30°. The angle of incidence of this beam is equal to the angle of the diffracted beam. If the angle of incidence of X-ray of wavelength \( \lambda \) which

\[
0 < \theta < \theta_H = 0 \text{ and } \sin \theta = 0 \]
\[
0 > \theta_H < 0 \text{ and } \sin \theta = 0
\]

For the isothermal reversible expansion of an ideal gas

D. 4
B. 2
A. 1
C. 3

The number of peptide bonds in the compound

D. 5 and 3
B. 5 and 4
A. 4 and 3

B-O-B units respectively are

In the structure of box, the numbers of boron atoms and

D-Glucose upon treatment with bromine-water gives
23 The first codon results in
the insertion of thymine after
64 1. DNA codons are ATG GAA.

4. A. Mf. < B. My
5. A. Mf. = B. My
6. A. Mf. > B. My

58 The spin-only magnetic moment of [Fe(NH)₂]²⁺ is
C. 4
D. 2
A. 1

59 The number of ions produced in water by dissolution of the
complex having the empirical formula C₉H₇N₂O₃ is
C. 17 and 5.92
D. 1.73 and 1.73
A. 1.73 and 1.73
B. 1.73 and 1.73

56 Generate sufficient energy to half-distance
C. Thimblethit mutation
D. nis-sense mutation
A. none-sense mutation
B. nonsense mutation

65 c. C. Mf. < B. My

54 Which one of these DNA
ACCCAGGCC
TGGCTTGGCC
AVGCCCTCTG
TATGAATGATA
AAGCCCGA

61 Human fetal hemoglobin differs from the adult

24 An ionic compound is formed between a metal M and a
non-metal Y. H.M complexes that contains Y in the
non-metal Y form of the complex is known as
C. 3 > 2 > 3
D. 3 > 2
B. 3 > 2 > 3
A. 3 > 2

62 Nucleotides are responsible for the production of
A. Carbohydrates
B. Messenger RNA
C. Lipids
D. Prostaglandin RNA

25 The order of S.I. reactivity in aqueous acidic solution
C. 1.73 and 5.92
D. 5.92 and 1.73
A. 1.73 and 1.73
B. 1.73 and 1.73

3. H₃C—C—CH₂—CH₂—C—H₃

26 Hemoglobin in fetal has
A. Higher affinity for oxygen
B. Lower affinity for oxygen
C. Both
D. Nothing

BIOLOGY
75. In orange and lemon, the edible part of the fruit is
A. peel
B. juice
C. fruit
D. stem

74. Stroke could be prevented/relieved with
A. exercise
B. arteries
C. veins
D. muscles

73. The only organ which is capable of producing fructose in
A. liver
B. small intestine
C. pancreas
D. muscle

69. According to Mendel's principle of segregation...
A. alleles of different genes assort independently
B. alleles of a gene assort independently
C. dominant traits override recessive traits
D. recessive traits override dominant traits

68. In green leaves, the light and dark reactions occur in
A. stomata
B. guard cells
C. chloroplasts
D. chlorophyll

67. Pinson yeast are...
A. filamentous
B. endosporic
C. imperfect
D. eukaryotic

66. Which one of the following techniques is used for the
detection of proteins?
A. Northern blotting
B. Western blotting
C. Southern blotting
D. In situ hybridization

65. A. oxides and cytochrome oxidase
B. oxides and cytochrome oxidase
C. oxides and cytochrome oxidase
D. oxides and cytochrome oxidase

64. The two enzymatic activities associated with Rubisco are
A. oxides and cytochrome oxidase
B. oxides and cytochrome oxidase
C. oxides and cytochrome oxidase
D. oxides and cytochrome oxidase

63. The following enzymes make place predominately during
A. DNA replication
B. transcription
C. processing
D. translation

62. DNA polymerase and reduce fidelity
A. CFEs reach with DNA polymerase and reduce fidelity
B. CFEs destroy the genetic heritage of human life
C. CFEs destroy the ozone layer and paternal inheritance
D. CFEs reach with protection involved in DNA repair

61. Which cancer because
A. Chloroform (CFE) are believed to be associated
B. CFEs reach with DNA and cause mutations
C. CFEs reach with DNA and cause mutations
D. Chloroform (CFE) are believed to be associated
The vertices of the base of an isosceles triangle lie on a certain x-axis. The coordinates are given as:

\[
\begin{pmatrix}
0 & 0 \\
2 & 0 \\
0 & 6
\end{pmatrix}
\]

A. 10
B. 16
C. 31
D. 32

\[ u = \sqrt{p + \frac{c}{q} + \frac{d}{c}} \]

Let \( a, b, c, d \) be real numbers such that

A. 50°
B. 120°
C. At least one of the coefficients of \( f(x) = ax^2 + bx + c \) is bigger than 50°.
D. At least one of the coefficients of \( f(x) = ax^2 + bx + c \) is bigger than 100.

The coefficient of the highest degree term in \( f(x) \) is \( a \).

A. The coefficient of the highest degree term in \( f(x) \) is \( a \).
B. The coefficient of the highest degree term in \( f(x) \) is \( b \).
C. The coefficient of the highest degree term in \( f(x) \) is \( c \).
D. The coefficient of the highest degree term in \( f(x) \) is \( d \).

81. Let \( f(x) \) be a non-constant polynomial with real coefficients.

A. common polynomial
B. common polynomial
C. common polynomial
D. common polynomial

82. Let \( |p| + |c| + |q| + |d| \) be real numbers such that

A. 4, 5, 6, 7
B. 4, 5, 6, 8
C. 4, 5, 6, 9
D. 4, 5, 6, 10

83. In a large isolated population, alleles \( p \) and \( q \) are in Hardy-Weinberg equilibrium. The proportions are \( p = 0.6 \) and \( q = 0.4 \). The proportion of the heterozygous genotype in the population is:

A. 0.24
B. 0.48
C. 0.96
D. 0.12

84. A B C D

- High competitive ability
- Slow growth and mutation
- High dispersal ability
- Low reproductive ability

85. Species that are most effective at colonising new habitats are:

A. Colonised by epiphytes
B. Colonised by epizoans
C. Colonised by epiphiens
D. Colonised by epibians

86. Which one of the following statements about phylogenesis is correct?

A. It is sensitive to high and therefore functions only in warm environments.
B. It is sensitive to cold and therefore functions in cold environments.
C. It is sensitive to moisture and therefore functions in moist environments.
D. It is sensitive to oxygen and therefore functions in oxygenated environments.

87. Which one of the following statements about phylogenesis is correct?
A ball is thrown at a height of 1.4 m from the ground. The ball bounces from the wall at a height of 3 m.

D. \[ \frac{W + m}{W + m} = \frac{R}{R} \]

C. \[ \frac{W + m}{W + m} = \frac{R}{R} \]

B. \[ \frac{W + m}{W + m} = \frac{R}{R} \]

A. \[ \frac{W + m}{W + m} = \frac{R}{R} \]

A small boy is throwing a ball towards a wall 6 m in front.
The figure below shows a circuit and its output voltage v as a function of time t.

Assuming the diodes to be ideal, which of the following graphs depicts the output voltage v as a function of time t?

A. $E_I = 1.3 \text{ eV}$, $I = 2 \mu A$
B. $E_I = 6.0 \text{ eV}$, $I = 1 \mu A$
C. $E_I = 3.6 \text{ eV}$, $I = 2 \mu A$

respectively.

The energy of a hydrogen atom is $-1.36 \text{ eV}$, the energy of a photon of energy $2.6 \text{ eV}$, given that the ground state of a singly ionized hydrogen atom in an excited state is $n = 7$.
A block of mass \( m \) slides from rest at a height \( H \) on a rough horizontal surface with an initial horizontal speed of \( v \). The friction force is shown in the figure. If the friction is unidirectional, the block's motion is

- (A) \( \text{constant} \)
- (B) \( \text{decreasing} \)
- (C) \( \text{increasing} \)
- (D) \( \text{decaying exponentially} \)

99. The initial horizontal speed of the sphere is

- (A) \( \sqrt{2gh} \)
- (B) \( \sqrt{2gh/5} \)
- (C) \( \sqrt{2gh/3} \)
- (D) \( \sqrt{2gh/2} \)

The solid sphere rolls without slipping first horizontally and then up to a point \( X \) at height \( h \) on an inclined plane before rolling down, as shown.

- (A) \( \text{decreases slightly} \)
- (B) \( \text{decreases by a factor of } \frac{1}{2} \)
- (C) \( \text{increases by a factor of } \frac{1}{2} \)
- (D) \( \text{increases slightly} \)

The period of oscillation of a simple harmonic motion, if the radius of the ball is doubled, is

- (B) \( \text{halved} \)
- (C) \( \text{doubled} \)
- (D) \( \text{remains unchanged} \)

The thre processes in a thermodynamic cycle shown in the

- (A) \( \text{adiabatic} \)
- (B) \( \text{isothermal} \)
- (C) \( \text{isobaric} \)
- (D) \( \text{isochoric} \)
101. The major product obtained in the reaction of aniline with

acetate imide is

\[ \text{HCONH} \]

102. The maximum number of isomers that can result

from monoaddition of 2-methyl-2-pentene with

\[ \text{Cl}_2 \]

N-bromosuccinimide in boiling CCl_4 is

\[ \text{CH}_3\text{CH} = \text{CHCH}_2\text{COCl} \]

100. A metallic prong consists of 4 rods made of the same

material. Cross-sections and some lengths as shown. The

lengths, fixed ends are kept at 100°C and the handle end is at

0°C. The temperature of the junction is

110° C. Then the height of a thermal switch on the

momentarily, then the string extends and the block reveals

then 4°C.
100 The amount of H3PO4 required to completely react with 100 ml of 0.25 M NaOH solution is

D. 150 moles
B. 135 moles
C. 125 moles
A. 120 moles

101 The density and specific gravity of a metal are 0.8 g/cm³ and 1.00 g/cm³ respectively. The mass of a metal of 80 cm³ is closest to

D. 80 g
B. 75 g
C. 152 g
A. 128 g

102 Consider the equations (1) and (2) with equilibrium conditions K and X respectively.

103 The compound X is which is insoluble in

D. CH₃COONH₄
B. CH₃COONH₂
A. CH₃COONH₃

104 In 108 g of water, 18 g of a volatile compound is dissolved.

105 The standard electrode potential of Zn/Zn²⁺ is 0.76 V and

D. 0.42 V and 181
B. 1.1 V and 181
C. 1.1 V and 131
A. 0.42 V and 181

106 Charge (k mol⁻¹) respectively for a Daniell cell will be

D. 0.42 and -181
B. 1.1 and -181
C. 1.1 and 213
A. 0.42 and 213

107 The concentration of excess HNO₃ in a solution X reacts with

108 The compound in metal X reacts with an excess of HNO₃ to form which dissolves in excess NH₃ to form which dissolves in excess NH₃ to form which dissolves in excess NH₃ to form which dissolves in excess NH₃

A. X²⁺
B. X⁺
C. X⁻
D. X³⁺
Presence of plasmodium in Plasmodium suggest:

always develops into a brain.

D. Any cell which is transplanted into another embryo.

C. Developmental fate of donor cells is not influenced by surrounding cells.

B. Developmental fate of donor cells is influenced by the surrounding developmental environment.

A. Cell fate is determined developing during early embryonic development.

Do you infer from this experiment?

113. Which of the following statements are true in the experiment?

A. B. C. D.

112. Watson and Crick model of DNA is a

A. Right-handed helix.

B. Left-handed helix.

C. Double-helical structure.

D. Continuous spectrum.

111. Do you think there is enough evidence to prove the plasmodium is a...
116 The figure below demonstrates the growth curves of two organisms A and B. Which of the following can explain the difference in growth between A and B?

- A. Competition
- B. Sympatrisms
- C. Commensalisms
- D. Mutualisms

117 A sequence from a PCR fragment of a mouse genome is shown below. Which of the following sets of DNA fragments is consistent with the digestion with both Eco RI and Bam HI?

- A. I and 3, 5, 6
- B. I and 2, 5
- C. I and 3, 6
- D. I and 3, 5, 8

119 In some species, individuals gorge reproduction and help

- A. An individual helps relatives only and gets indirect
- B. The individual benefits because it can insert the
- C. The individual benefits because it goes access to
- D. The species benefits from a reduction in competition

"Which of the following sets of DNA fragments is consistent with the digestion with both Eco RI and Bam HI?"

A. I and 3, 5, 6
B. I and 2, 5
C. I and 3, 6
D. I and 3, 5, 8

..."