MATHS

BOOKS - DEEPTI MATHS (TELUGU ENGLISH)

COORDINATE SYSTEM (2D)

Solved Examples

1. If (2, -2) and (5, 2) are the opposite ends of a square, then the length of the side of the square is

A. 5

B. $\sqrt{5}$

C. $5\sqrt{2}$

D. $5/\sqrt{2}$

Answer: D

Watch Video Solution

2. If A(2, 2), B(6, 3) and C(4, 11) are vertices of a triangle ABC and D, E are the midpoints of $\overline{BC}$ and $\overline{CA}$ respectively, then the length of $\overline{DE}$ is

A. 4

B. $\sqrt{17}$

C. $\frac{\sqrt{17}}{2}$

D. $\frac{\sqrt{18}}{2}$

Answer: C

Watch Video Solution

3. If A, B, C are collinear points such that A = (3, 4), B = (7, 7) and AC = 10 then C =

A. (5, 2)

B. (-5, 2)

C. (-5, -2)

D. (5, -2)

Answer: C

Watch Video Solution

Exercise 1

1. The distance between the points $(\tan\alpha, 1)$, (0, 2) is

A. $|\tan\alpha|$

B. $|\sec\alpha|$

C. $|\cos\alpha|$

D. $|\sin\alpha|$

Answer: B

Watch Video Solution

Exercise 2

1. The distance between the points $(\cos\theta, \sin\theta), (-\sin\theta, \cos\theta)$ is

A. 1

B. 2

C. $\sqrt{2}$

D. $\sqrt{6}$

Answer: C

Watch Video Solution

Exercise 3

1. If $\pi/2 < \theta < \pi$ then the distance between the points $(\cot\theta, 3), (0, 2)$ is

A. $\sec\theta$

B. $\text{cosec}\theta$

C. $-\sec\theta$

D. $-\text{cosec}\theta$

Answer: B

Watch Video Solution

Exercise 4

1. If the distance between the points $(a, 2)$ and $(3, 4)$ is 8 then a=

A. $\sqrt{60}$

B. $-\sqrt{60}$

C. 3

D. $3 \pm \sqrt{60}$

Answer: D

Watch Video Solution

Exercise 5

1. If the distance between the points $(a\cos\theta, a\sin\theta)$ and $(a\cos\phi, a\sin\phi)$ is 2a, $\theta =$

A. $2n\pi \pm \pi + \phi, n \in Z$

B. $n\pi + \frac{\pi}{2} + \phi, n \in Z$

C. $n\pi - \phi, n \in Z$

D. $2n\pi + \phi, n \in Z$

Answer: A

Watch Video Solution

Exercise 6

1. A line is of length 10 unit and one end is at (2, -3). If the abscissa of the other end is 10. Then its ordinate is

A. 9

B. 3

C. -3

D. 6

Answer: B

Watch Video Solution

Exercise 7

1. The distance between two points is 5. One of them is (3, 2) and the ordinate of the second is -1 then its x coordinates are

A. $7, \ -1$

B. $-7, 1$

C. $-7, \ -1$

D. $7, 1$

Answer: A

Watch Video Solution

Exercise 8

1. If the distance between the points $(a\cos 48^\circ, 0)$ and $(0, a\cos 12^\circ)$ is d then $d^2 - a^2 =$

A. $a^2\left(\sqrt{5}-1\right)/4$

B. $a^2\left(\sqrt{5}+1\right)/4$

C. $a\left(\sqrt{5}-1\right)/8$

D. $a^2\left(\sqrt{5}+1\right)/8$

Answer: D

Watch Video Solution

Exercise 9

1. If $A=\left(at^2, 2at\right), B=\left(\frac{a}{t^2}, -\frac{2a}{t}\right), S(a,0)$ then $\frac{1}{SA}+\frac{1}{SB}=$

A. a

B. $1/a$

C. $2/a$

D. $2a/3$

Answer: B

Watch Video Solution

Exercise 10

1. The point on Y- axis which is equidistant from (6, -1) and (2, 3) is

A. $(0, -1)$

B. $(0, 1)$

C. $(0, -3)$

D. $(0, 3)$

Answer: C

Watch Video Solution

Exercise 11

1. The points (2, -2), (-1, 2),(3, 5) are the vertices of

A. equilateral triangle

B. isosceles triangle

C. right angled triangle

D. right angled isosceles triangle

Answer: D

Watch Video Solution

Exercise 12

1. The points $(2, 4), (2, 6), \left(2 + \sqrt{3}, 5\right)$ are the vertices of

A. equilateral triangle

B. isosceles triangle

C. right angled triangle

D. right angled isosceles triangle

Answer: A

Watch Video Solution

Exercise 13

1. The points (7, 9) (3, -7), (-3, 3) are the vertices of

A. equilateral triangle

B. isosceles triangle

C. right angled triangle

D. right angled isosceles triangle

Answer: D

Watch Video Solution

Exercise 14

1. The three points (2, -4), (4, -2), (7, 1)

A. are collinear

B. form an equilateral triangle

C. form a right angled triangle

D. form an isosceles triangle

Answer: A

Watch Video Solution

Exercise 15

1. If x_1, x_2, x_3 are in A.P. and y_1, y_2, y_3 are in A.P. then the points $(x_1, y_1), (x_2, y_2), (x_3, y_3)$

A. form a right angled triangle

B. form an equilateral triangle

C. form an isosceles triangle

D. are collinear

Answer: D

Watch Video Solution

Exercise 16

1. If $A(5, 3), B(11, -5), P(12, \lambda)$ and $\angle APB = 90^\circ$, then $\lambda =$

A. 2 or 3

B. 3 or 4

C. 2 or -4

D. 3 or -2

Answer: C

Watch Video Solution

Exercise 17

1. If the points $(0, 0), (3, \sqrt{3}), (x, y)$ form an equilateral triangle, then $(x, y) =$

A. $(0, 2\sqrt{3}), (3, -\sqrt{3})$

B. $(1, 2\sqrt{3}), (3, \sqrt{3})$

C. $(1, \sqrt{3}), (3, -\sqrt{3})$

D. none

Answer: A

View Text Solution

Exercise 18

1. If (3, 2), (-3, 2), (0, h) are the vertices of an equilateral triangle and $h < 0$ then the value of h is

A. $2 - \sqrt{3}$

B. $2 - 2\sqrt{3}$

C. $2 - 3\sqrt{3}$

D. $3 - 2\sqrt{3}$

Answer: C

Watch Video Solution

Exercise 19

1. If (2, 4), (2, 6) are two vertices of an equilateral triangle then the third vertex is

A. $(2+\sqrt{3}, 5)$

B. $(\sqrt{3}-2, 5)$

C. $(5, 2+\sqrt{3})$

D. $(5, 2-\sqrt{3})$

Answer: A

Watch Video Solution

Exercise 20

1. If (2, 4), (4, 2) are extremities of the hypotenuse of a right angled isosceles triangle, then the third vertex is

A. (2, 2) or (4, 4)

B. (3, 3) or (4, 4)

C. (2, 2) or (3, 3)

D. (2, 3) or (3, 2)

Answer: A

Watch Video Solution

Exercise 21

1. If ABC is an isosceles triangle where B = (1, 3) and C = (-2, 7) then A =

A. $(5/6, 6)$

B. $(6, 5/6)$

C. $(7, 1/8)$

D. none

Answer: A

Watch Video Solution

Exercise 22

1. If A(x, 4), B(1, -2), C(-3, 4) form an isosceles triangle with vertex at B then x =

A. 3

B. -5

C. 3 or -5

D. 5 or -3

Answer: D

Watch Video Solution

Exercise 23

1. If O is the origin and if $A(x_1, y_1), B(x_2, y_2)$ are two points then $OA \cdot OB \cdot \cos\angle AOB =$

A. $x_1^2 + y_1^2$

B. $x_1y_2 + x_2y_1$

C. $x_1x_2 + y_1y_2$

D. $x_1y_2 - x_2y_1$

Answer: C

Watch Video Solution

Exercise 24

1. If O is the origin and $P = (2, 3), Q = (4, 5)$ then $OP \cdot OQ \cos\angle POQ =$

A. 8

B. 15

C. 22

D. 23

Answer: D

Watch Video Solution

Exercise 25

1. If O is the origin and $A(x_1, y_1), B(x_2, y_2)$ are two points then $OA \cdot OB \cdot \sin\angle AOB =$

A. $x_1^2 + y_1^2 - x_2^2 - y_2^2$

B. $x_1x_2 + y_1y_2$

C. $x_1y_2 + x_2y_1$

D. $|x_1y_2 - x_2y_1|$

Answer: D

Watch Video Solution

Exercise 26

1. If A = (1, 1), B(4, 5) and C(6, 13) then cosA =

A. $64/63$

B. $63/65$

C. $56/36$

D. $36/56$

Answer: B

Watch Video Solution

Exercise 27

1. If the vertices of a triangle A, B, C are A(0, 0), B(2, 1), C(9, -2) then cosB =

A. $\frac{16}{5\sqrt{17}}$

B. $\frac{11}{\sqrt{290}}$

C. $\frac{16}{5\sqrt{7}}$

D. $\frac{-11}{\sqrt{290}}$

Answer: D

Watch Video Solution

Exercise 28

1. The points (2, 5), (0, 3), (2, 1), (4, 3) taken in order, form

A. parallelogram

B. rectangle

C. rhombus

D. square

Answer: D

Watch Video Solution

Exercise 29

1. The points (7, 1), (4, 4), (-2,-2), (1, -5) taken in order, form

A. parallelogram

B. rectangle

C. rhombus

D. square

Answer: B

Watch Video Solution

Exercise 30

1. The points (7, 8), (1, 6), (-1, 0), (5, 2) taken in order, form

A. parallelogram

B. rectangle

C. rhombus

D. square

Answer: C

Watch Video Solution

Exercise 31

1. The points (-5, 12), (-2, -3), (9, -10), (6, 5) taken in order, form

A. parallelogram

B. rectangle

C. rhombus

D. square

Answer: A

Watch Video Solution

Exercise 32

1. find the centroid of the triangle $(-a, -b), (a, b), (a^3, ab)$

A. $\frac{a^3}{3}, \frac{ab}{3}$

B. $\frac{a+a^2}{3}, \frac{ab}{3}$

C. 0

D. $-\frac{a^3}{3}, \frac{-ab}{3}$

Answer: A

Watch Video Solution

Exercise 33

1. If the distance of (4, 0) from (a, b) is double the distance between point (0,0) and (a, b), then the relation between a and b is

Watch Video Solution

Exercise 34

1. The midpoint of a line segment is (-4, -2). If (-6, 4) is one end then the other end is

A. (2, 8)

B. (-2, 8)

C. (2, -8)

D. (-2, -8)

Answer: D

Watch Video Solution

Exercise 35

1. If A(3, -4), B(7, 2) are the ends of a diameter of a circle and C(3, 2) is a point on the circle, then the orthocentre of the ΔABC is

A. (3, -4)

B. (7, 2)

C. (5, -1)

D. (0, 0)

Answer: C

Watch Video Solution

Exercise 36

1. If the midpoint of the line joining $(x, y+1)$ and $(x+1, y+2)$ is $(3/2, 5/2)$ then the midpoint of the line joining

$(x-1, y+1), (x+1, y-1)$ is

A. (-1, -1)

B. (-1, 1)

C. (1, -1)

D. (1, 1)

Answer: D

Watch Video Solution

Exercise 37

1. The points which divide internally and externally the line segment joining the points (1, 7), (6, -3) in the ratio $2:3$ are

A. (3, 3) (15, 15)

B. (3, 3), (-15, -15)

C. (3, 3),(-9, 27)

D. (-3, -3), (9, 27)

Answer: C

Watch Video Solution

Exercise 38

1. The points of trisection of the line segment joining (-5, 2),(3,6) are

A. $(27/5, 7/5), (15, 23)$

B. $(-7/3, 10/3), (1/3, 14/3)$

C. $(-1, 24/7), (-23/3, -4/3)$

D. $(3, 1), (0, 5)$

Answer: B

Watch Video Solution

Exercise 39

1. The coordinates of the point that is two thirds away from (-4, 3) to (5, 7) is

A. $(-2, 29/5)$

B. $(7/5, 27/5)$

C. $(2, 17/3)$

D. none

Answer: C

Watch Video Solution

Exercise 40

1. If A, B, C are collinear points such that A = (3, 4), B = (7, 7) and AC = 10 then C =

A. (5, 2)

B. (5, -2)

C. (-5, 2)

D. (-5, -2)

Answer: D

Watch Video Solution

Exercise 41

1. If (2, -3), (-2, 1) are the points of trisection of A, B then A and B are

A. (6, -7), (-6, 5)

B. (6, -7), (-6, 4)

C. (5, -7), (-6, 4)

D. (5, -7), (-6, 5)

Answer: A

Watch Video Solution

Exercise 42

1. The point which divides the line segment joining $(a+b, a-b), (a-b, a+b)$ in the ratio a : b externally is

A. $\left(\frac{a^2-2ab-b^2}{a-b}, \frac{a^2+b^2}{a-b}\right)$

B. $\left(\frac{a^2+2ab-b^2}{a-b}, \frac{a^2+b^2}{a-b}\right)$

C. $\left(\frac{a^2+2ab+b^2}{a-b}, \frac{(a+b)^2}{a-b}\right)$

D. none

Answer: A

Watch Video Solution

Exercise 43

1. The fourth vertex of the rectangle whose other vertices are (4, 1), (7, 4) (13, -2) is

A. (10, -5)

B. (10, 5)

C. (-10, 5)

D. (-10, -5)

Answer: A

Watch Video Solution

Exercise 44

1. The fourth vertex of the square whose consecutive vertices are (2, 1), (4, 3), (-2, 5) is

A. (2, -2)

B. (17, 13)

C. (-4, 3)

D. (6, 9)

Answer: C

Watch Video Solution

Exercise 45

1. The extremities of a diagonal of a parallelogram are the points (3, -4) and (-6, 5). If the third vertex is (-2, 1) then the fourth vertex is

A. (1, 0)

B. (-1, 0)

C. (1, 1)

D. (-1, -1)

Answer: B

Watch Video Solution

Exercise 46

1. Taking AB, AD as axes, the coordiantes of the point C when ABCD is a square of side a is

A. (a, a)

B. (1, 2a)

C. (2a, 2a)

D. none

Answer: A

Watch Video Solution

Exercise 47

1. Taking AB, AD as axes, the coordinates of the point C when ABCD is a rectangle of sides a and b is

A. (a, b)

B. (a, 2b)

C. (2a, b)

D. none

Answer: A

Watch Video Solution

Exercise 48

1. ABCD is a square of side 2a. Taking the centre of the square as origin and axes parallel to the sides AB and AD. The coordinates of the vertices of the square are

A. (a, a), (a, 0), (-a, a), (a, -a)

B. (a, a), (a, -a), (-a, -a), (-a, a)

C. (a, 0), (a, a), (-a, -a), (-a, a)

D. none

Answer: B

Watch Video Solution

Exercise 49

1. Two opposite vertices of a square are (1, -2) and (-5, 6) then the length of the side is

Watch Video Solution

Exercise 50

1. A square has two opposite vertices at the points (2, 3) and (4, 1). The length of the side is

A. 0

B. 1

C. 3

D. 2

Answer: D

Watch Video Solution

Exercise 51

1. If (2,1), (-2, 5) are two opposite vertices of square then the area of the square is

A. 4

B. 12

C. 16

D. 36

Answer: C

Watch Video Solution

Exercise 52

1. ABCD is a rectangle. If A = (2, 3), C = (8, 11) and BD is parallel to y-axis then B and D are

A. (5, 12), (5, 2)

B. (3, 9), (3, 2)

C. (7, 5), (7, 15)

D. (12, 5), (2, 5)

Answer: A

View Text Solution

Exercise 53

1. The centre of the circle passing through (2, 3), (5, 3), (5, -1), (2, -1) is

A. (2, -1)

B. (5, -1)

C. (2, 3)

D. $(7/2, 1)$

Answer: D

Watch Video Solution

Exercise 54

1. x-axis divides the line segment joining (2, -3), (5, 7) in the ratio

A. $1:2$

B. $3:7$

C. $4:5$

D. $3:4$

Answer: B

Watch Video Solution

Exercise 55

1. y-axis divides the line segment joining (3, 5), (-4, 7) in the ratio

A. $1:2$

B. $3:7$

C. $4:5$

D. $3:4$

Answer: D

Watch Video Solution

Exercise 56

1. The ratio in which (2, 3) divides the line segment joining (4, 8), (-2, -7) is

A. $2:1$ externally

B. $2:3$

C. $4:3$ externally

D. $1:2$

Answer: D

Watch Video Solution

Exercise 57

1. The harmonic conjugate of (7, 5) w.r.t (4, 2), (9, 7) is

A. (2, 5)

B. (-3, 2)

C. (-8, -14)

D. (19, 17)

Answer: D

Watch Video Solution

Exercise 58

1. If Q is the harmonic conjugate of P w.r.t. A, B and AP = 2, AQ = 6 then AB =

A. 5

B. 1

C. 3

D. 2

Answer: C

Watch Video Solution

Exercise 59

1. If A and B are the points (-3, 4), (2, 1) then the coordinates of point C on AB produced such that AC = 2BC are

A. (2, 4)

B. (3, 7)

C. (7, -2)

D. $(-1/2, 5/2)$

Answer: C

Watch Video Solution

Exercise 60

1. P = (-5, 4) and Q = (-2, -3). If $\overline{PQ}$ is produced to R such that P divides $\overline{QR}$ externally in the ratio $1:2$, then R is

A. (1, 10)

B. (1, -10)

C. (10, 1)

D. (2, -10)

Answer: B

Watch Video Solution

Exercise 61

1. P and Q are points on the line joining A(-2, 5), B(3, -1) such that AP = PQ = QB. Then the mid point of PQ is

A. $(1/2, 2)$

B. $(-1/2, 4)$

C. $(2, 3)$

D. $(1, 4)$

Answer: A

Watch Video Solution

Exercise 62

1. If P, Q are the points of trisection of A(1, -2), B(-5, 6) then PQ =

A. 10

B. 5

C. $10/3$

D. $5/2$

Answer: C

Watch Video Solution

Exercise 63

1. If P(-1, 4), Q(11, -8) divide AB harmonically in the ratio $3:2$ then A, B in order are

A. (-4, 7), (1, 2)

B. (1, 2), (-4, 7)

C. (7, -4), (2, 1)

D. (2, 1), (7, -4)

Answer: A

Watch Video Solution

Exercise 64

1. If A = (1, -1), B =(-1, 3), C =(5, 1) then the length of the median through A is

A. $3\sqrt{2}$

B. $2\sqrt{3}$

C. $\sqrt{10}$

D. 2

Answer: C

Watch Video Solution

Exercise 65

1. A(a, b) and B(0, 0) are two fixed points. M_1 is the mid point of AB. M_2 is the midpoint of $\overline{AM_1}$, M_3 is the midpoint of $\overline{AM_2}$ and so on. Then M_5 is

A. $\left(\frac{7a}{8}, \frac{7b}{8}\right)$

B. $\left(\frac{15a}{16}, \frac{15b}{16}\right)$

C. $\left(\frac{31b}{32}, \frac{31b}{32}\right)$

D. $\left(\frac{63a}{64}, \frac{63b}{64}\right)$

Answer: C

Watch Video Solution

Exercise 66

1. The point whose coordinates are $x = x_1 + t(x_2 - x_1), y = y_1 + t(y_2 - y_1)$ divides the join of (x, y) and (x_2, y_2) in the ratio

A. $\frac{t}{1+t}$

B. $\frac{1+t}{t}$

C. $\frac{t}{1-t}$

D. $\frac{1-t}{t}$

Answer: C

Watch Video Solution

Exercise 67

1. If the point $(x_1 + t[x_2 - x_1], y_1 + t[y_2 - y_1])$ divides the join of (x_1, y_1) and (x_2, y_2) internally, then

A. $t < 0$

B. $0 < t < 1$

C. $t > 1$

D. $t = 1$

Answer: B

Watch Video Solution

Exercise 68

1. Midpoints of the sides AB and AC of ΔABC are (-3, 5) and (-3, -3) respectively, then the length of BC =

A. 10

B. 15

C. 16

D. 30

Answer: C

Watch Video Solution

Exercise 69

1. A = (2, 2), B = (6, 3), C(4, 1) are the vertices of a triangle. If D, E are the midpoints of BC, CA then DE =

A. $\sqrt{17}$

B. $\frac{1}{2}\sqrt{17}$

C. $2\sqrt{17}$

D. none

Answer: B

Watch Video Solution

Exercise 70

1. If the midpoint of the sides $\overline{BC}$, $\overline{CA}$, $\overline{AB}$ of ΔABC are (3, -3), (3, -1), (1, 1) respectively then the vertices A, B, C are

A. A(1, 3), B(1, -1), C(5, -5)

B. A(1, -3), B(1, -1), C(5, -5)

C. A(1, 3), B(1, -1), C(5, 5)

D. A(1, 3), B(1, 1), C(5, -5)

Answer: A

Watch Video Solution

Exercise 71

1. The points D, E, F are the midpoints of the sides $\overline{BC}, \overline{CA}, \overline{AB}$ of ΔABC respectively. If A = (-2, 3), D = (1, -4), E = (-5, 2), then F =

A. (4, 3)

B. (4, -3)

C. (-4, 3)

D. (-4, -3)

Answer: B

Watch Video Solution

Exercise 72

1. If A = (3, -4) and the midpoints of AB, AC are (2, -1), (4, -5) respectively then the midpoint of BC is

A. (1, 2)

B. (3, -2)

C. (-1, 2)

D. (0, -3)

Answer: B

Watch Video Solution

Exercise 73

1. The centroid of the triangle formed by (7, 4), (4, -6), (-5, 2) is

A. (2, 3)

B. (2, -3)

C. (2, -1)

D. (2, 0)

Answer: D

Watch Video Solution

Exercise 74

1. If the centroid of the triangle whose vertices are (2, 4), (3, k) and (4, 2) is (k, 3) then k =

A. 1

B. 2

C. 3

D. 4

Answer: C

Watch Video Solution

Exercise 75

1. The centroid of a triangle is (2, 3) and two of its vertices are (5, 6) and (-1, 4). The third vertex of the triangle is

A. (2, 1)

B. (2, -1)

C. (1, 2)

D. (1, -2)

Answer: B

Watch Video Solution

Exercise 76

1. If G is the centroid of ΔABC, then $\frac{AG^2 + BG^2 + CG^2}{AB^2 + BC^2 + CA^2} =$

A. 1

B. 3

C. $1/3$

D. -1

Answer: C

View Text Solution

Exercise 77

1. If a vertex of a triangle is (1, 1) and the midpoints of two sides through this vertex are (-1, 2) and (3, 2), then the centroid of the triangle is

A. $\left(-1, \frac{7}{3}\right)$

B. $\left(\frac{-1}{3}, \frac{7}{3}\right)$

C. $\left(1, \frac{7}{3}\right)$

D. $\left(\frac{1}{3}, \frac{7}{3}\right)$

Answer: C

Watch Video Solution

Exercise 78

1. The sun of the squares of the sides of a triangle is 32 then the sum of the squares of the medians of the triangle is

A. 20

B. 24

C. 16

D. 26

Answer: B

Watch Video Solution

Exercise 79

1. If (1, 2), (4, -3), (-2, 4) are midpoints of the sides of a triangle, then its centroid is

A. (1, 0)

B. (1, 1)

C. (1, 2)

D. (2, 2)

Answer: B

Watch Video Solution

Exercise 80

1. The centroid of ΔABC is (2, 7). If the points B, C lie on x, y axes respectively and A = (4, 8) then B and C are

A. B = (2, 0), C = (0, 13)

B. B = (0, 2), C = (0, 13)

C. B = (2, 0), C = (10, 0)

D. B = (0, 0), C = (0, 13)

Answer: A

Watch Video Solution

Exercise 81

1. In ΔABC, centroid = (2, 0). If (1, 3) is the midpoint of BC, then A =

A. (7, 4)

B. (-5, 2)

C. (4, -6)

D. (-3, -2)

Answer: C

Watch Video Solution

Exercise 82

1. In triangle ABC, $\overline{AD}$ is median. If A = (1, 1) and D = (1, -5), then the centroid of the triangle is

A. (1, -3)

B. (-1, -3)

C. (-1, 3)

D. (1, 3)

Answer: A

Watch Video Solution

Exercise 83

1. If the centroid of the triangle formed with (a , b) , (b , c) and (c , a) is O(0 , 0) then $a^3 + b^3 + c^3 =$ .....

A. 0

B. abc

C. $a + b + c$

D. 3abc

Answer: D

Watch Video Solution

Exercise 84

1. A(4, 1), B(7, 4), C, D are the vertices of a rectangle. If (8, 1) is the centroid of ΔABC, then D =

A. (13, -2)

B. (10, -5)

C. (-8, 3)

D. (2, 17)

Answer: B

View Text Solution

Exercise 85

1. If the lengths of two medians of a triangle are equal, then the triangle is

A. right angled

B. equilateral

C. isosceles

D. scalane

Answer: C

Watch Video Solution

Exercise 86

1. The centroid of the triangle formed by (2, -5), (2, 7), (4, 7) is

A. (2, -9)

B. (3, 1)

C. (4, -1)

D. $(8/3, 3)$

Answer: D

Watch Video Solution

Exercise 87

1. The circumradius of the triangle formed by (3, 7), (3, -2), (5, 7) is

A. $\sqrt{85}$

B. $2\sqrt{85}$

C. $\sqrt{85}/2$

D. $\sqrt{85/2}$

Answer: C

Watch Video Solution

Exercise 88

1. The point of intersection of the perpendicular bisectors of the sides of the triangle formed by the points (2, 1), (5, 2) and (3, 4) is

A. $\left(\frac{13}{2}, \frac{9}{2}\right)$

B. $\left(\frac{13}{4}, \frac{9}{4}\right)$

C. $\left(\frac{13}{2}, 3\right)$

D. $\left(\frac{13}{5}, \frac{9}{5}\right)$

Answer: B

View Text Solution

Exercise 89

1. The point P is equidistant from $A(1, 3), B(-3, 5)$ and $C(5, -1)$, then PA is equal to

A. 5

B. $5\sqrt{5}$

C. 25

D. $5\sqrt{10}$

Answer: D

Watch Video Solution

Exercise 90

1. The circumcentre of a triangle lies with in the triangle only when the triangle is

A. acute angled triangle

B. right angled triangle

C. obtuse angled triangle

D. none

Answer: A

Watch Video Solution

Exercise 91

1. The vertices of a triangle are (6, 6), (0, 6) and (6, 0). The distance between its circumcentre and centroid is

A. $2\sqrt{2}$

B. 2

C. $\sqrt{2}$

D. 1

Answer: C

Watch Video Solution

Exercise 92

1. The orthocentre of the triangle formed by (-1, -3), (-1, 4), (5, -3) is

A. (2, 7)

B. $(-3, -4/3)$

C. (4, 3)

D. (-1, -3)

Answer: D

Watch Video Solution

Exercise 93

1. The orthocentre of the triangle formed by $(2, -1/2), (1/2, -1/2)$ and $\left(2, \left(\sqrt{3}-1\right)/2\right)$ is

A. $\left(3/2, \left(9\sqrt{3}-3\right)/6\right)$

B. $(2, -1/2)$

C. $\left(5/4, \left(\sqrt{3}-2\right)/4\right)$

D. $(1/2, -1/2)$

Answer: B

Watch Video Solution

Exercise 94

1. Origin is the orthocentre of ΔABC where A = (5, -1), B = (-2, 3) then the orthocentre of ΔOAC is

A. (-4, -7)

B. (3, -2)

C. (-2, 3)

D. (5, -1)

Answer: C

View Text Solution

Exercise 95

1. If O is the orthocentre of the triangle formed by A(1, -3), B(7, 2), C(2, 5) then the distance between the orthocentres of ΔBOC, ΔAOB is

A. $\sqrt{65}$

B. $2\sqrt{65}$

C. $\frac{1}{2}\sqrt{65}$

D. none

Answer: A

View Text Solution

Exercise 96

1. If origin is the orthocentre of a triangle formed bythe points $(\cos\alpha, \sin\alpha, 0), (\cos\beta, \sin\beta, 0), (\cos\gamma, \sin\gamma, 0)$ then $\sum \cos(2\alpha - \beta - \gamma) =$ -

A. 0

B. 1

C. 2

D. 3

Answer: D

Watch Video Solution

Exercise 97

1. If A(3, -4), B(7, 2) are the ends of a diameter of a circle and C(3, 2) is a point on the circle, then the orthocentre of the ΔABC is

A. (0, 0)

B. (3, 4)

C. (3, 2)

D. (7, 2)

Answer: C

Watch Video Solution

Exercise 98

1. The incentre of the triangle formed by the points (0, 0), (5, 12), (16, 12) is

A. (6, 9)

B. (7, 9)

C. (6, 7)

D. (9, 7)

Answer: B

Watch Video Solution

Exercise 99

1. The excentre of the triangle formed by the points (0, 3), (4, 0), (0, 0) which is opposite to (0, 0) is

A. (3, 1)

B. (6, 6)

C. (1, -1)

D. $(3/2, 5/2)$

Answer: C

Watch Video Solution

Exercise 100

1. If $(0, 1/2), (1/2, 1/2), (1/2, 0)$ are the midpoints of the sides of a triangle, then incentre of the triangle is

A. $\left(\frac{1}{\sqrt{2}}, \frac{1}{\sqrt{2}}\right)$

B. $\left(1+\frac{1}{\sqrt{2}}, 1+\frac{1}{\sqrt{2}}\right)$

C. $\left(1-\frac{1}{\sqrt{2}}, 1-\frac{1}{\sqrt{2}}\right)$

D. $\left(1+\frac{1}{\sqrt{2}}, 1-\frac{1}{\sqrt{2}}\right)$

Answer: C

View Text Solution

Exercise 101

1. The x-coordinate of the incentre of the triangle that has the coordinates of mid points of its sides as (0, 1), (1, 1) and (1, 0) is

A. $1+\sqrt{2}$

B. $1-\sqrt{2}$

C. $2+\sqrt{2}$

D. $2-\sqrt{2}$

Answer: D

View Text Solution

Exercise 102

1. The vertices of a triangle are A(0, 0), B(1, 0) and C(0, 2). The point of intersection of bisectors of internal angles is

A. $\left(\frac{1}{3+\sqrt{5}}, \frac{1}{3+\sqrt{5}}\right)$

B. $\left(\frac{2}{3+\sqrt{5}}, \frac{2}{3+\sqrt{5}}\right)$

C. $\left(\frac{1}{3+\sqrt{5}}, \frac{2}{3+\sqrt{5}}\right)$

D. $\left(\frac{2}{3+\sqrt{5}}, \frac{1}{3+\sqrt{5}}\right)$

Answer: B

Watch Video Solution

Exercise 103

1. If I_1, I_2, I_3 are excentres of the triangle with vertices (0, 0), (5, 12), (16, 12) then the orthocentre of $\Delta I_1 I_2 I_3$ is

A. (7, 9)

B. (6 ,7)

C. (9, 7)

D. (6, 9)

Answer: A

Watch Video Solution

Exercise 104

1. If A = (2, 3), B = (-2, -5), C =(-4, 6) and if P is a point on BC such that AP bisects the angle A, then P =

A. $\left(-\frac{22}{7}, \frac{9}{7}\right)$

B. $\left(\frac{22}{7}, \frac{9}{7}\right)$

C. $\left(\frac{22}{7}, -\frac{9}{7}\right)$

D. $\left(-\frac{22}{7}, -\frac{9}{7}\right)$

Answer: A

View Text Solution

Exercise 105

1. In ΔABC, the sides BC = 5, CA = 4, AB = 3. If A(0, 0) and the internal bisector of angle A meets BC in $D(12/7, 12/7)$ then incentre of ΔABC is

A. (2, 2)

B. (3, 2)

C. (2, 3)

D. (1, 1)

Answer: D

View Text Solution

Exercise 106

1. The perpendicular from the origin to the line joining the points $A(a\cos\alpha, a\sin\alpha)$ and $B(a\sin\beta, a\cos\beta)$ divides AB in the ratio

A. $1:2$

B. $2:1$

C. $2:3$

D. $1:1$

Answer: D

Watch Video Solution

Exercise 107

1. The foot of the perpendicular from origin on the line joining (3, -4), (-4, 3) is

A. (1, 1)

B. (-1, -1)

C. $(1/2, 1/2)$

D. $(-1/2, -1/2)$

Answer: D

Watch Video Solution

Exercise 108

1. The angles A, B and C are in A.P. in a ΔABC. If AB = 6, BC = 7 then AC =

A. 5

B. 7

C. 8

D. none

Answer: D

Watch Video Solution

Exercise 109

1. In a ΔABC, AB = 6, BC = 5 and CA = 4 and AP bisects the angle A. If P lies on BC then BP =

A. 3

B. $31/10$

C. $29/10$

D. $9/2$

Answer: A

View Text Solution

Exercise 110

1. If the orthocentre and circumcentre of a triangle are (2, -3), (5, 6) then the centroid is

A. (2, 7)

B. $(-3, -4/3)$

C. (4, 3)

D. (-1, -3)

Answer: C

Watch Video Solution

Exercise 111

1. If (0, 1) is the orthocentre and (2, 3) is the centroid of a triangle. Then its circumcentre is

A. (3, 2)

B. (1, 0)

C. (4, 3)

D. (3, 4)

Answer: D

Watch Video Solution

Exercise 112

1. If the centroid and circumcentre of a triangle are (3, 3), (6, 2) then the orthocentre is

A. (9, 5)

B. (3, -1)

C. (-3, 5)

D. (-3, 1)

Answer: C

Watch Video Solution

Exercise 113

1. Origin is the orthocentre of the triangle formed by the points (5, -1), (-2, 3) and (-4, -7) then its ninepoint centre is

A. $(-1/3, -5/3)$

B. (5, 3)

C. (1, 1)

D. $(-1/4, -5/4)$

Answer: D

View Text Solution

Exercise 114

1. If (3, -2) is the orthocentre and (-1, 4) is the circumcentre of ΔABC then centroid of ΔABC is

Watch Video Solution

Exercise 115

1. The radius of nien point circle of the triangle formed by (6, 2), (4, 6),(0, 4) is

A. $\sqrt{7}/2$

B. $\sqrt{2}$

C. $\sqrt{5}/\sqrt{2}$

D. $\frac{5}{\sqrt{2}}$

Answer: C

View Text Solution

Exercise 116

1. The area of the triangle with vertices at (-4, -1), (1, 2), (4, -3) is

A. 12

B. 18

C. 17

D. 30

Answer: C

Watch Video Solution

Exercise 117

1. The area of the triangle formed by the points $(a, b+c), (b, c+a), (c, a+b)$ is

A. abc

B. 2ab

C. 3abc

D. 0

Answer: D

Watch Video Solution

Exercise 118

1. The area of the triangle formed by $(a+3, a-2), (a-4, a+5)$ and (a, a) is

A. 0

B. a

C. $7/2$

D. a^2

Answer: C

Watch Video Solution

Exercise 119

1. The area of the triangle formed by the points $(a, 1/a), (b, 1/b), (c, 1/c)$ is

A. $\left|\frac{(a+b)(b+c)(c+a)}{2abc}\right|$

B. $\left|\frac{(a-b)(b-c)(c-a)}{2abc}\right|$

C. $\left|\frac{(a+b)(b-c)(c-a)}{2abc}\right|$

D. $\left|\frac{(a+b)(b-c)(c+a)}{2abc}\right|$

Answer: B

Watch Video Solution

Exercise 120

1. The area of the triangle with vertices $(a, 0), (a\cos\theta, b\sin\theta), (a\cos\theta, -b\sin\theta)$ is

A. $\sqrt{3}\frac{ab}{a}$

B. $2\sqrt{3}\frac{ab}{4}$

C. $|ab(1-\cos\theta)\sin\theta|$

D. $\sqrt{3}ab$

Answer: C

Watch Video Solution

Exercise 121

1. The area of the triangle with vertices $(a, b), (ar, bs), \left(ar^2, bs^2\right)$ is

A. $ab(r-1)(s-1)|$

B. $|ab(r-1)(s-1)(s-r)|$

C. $\frac{1}{2}|ab(r+1)+(s+1)+(s-r)|$

D. $\frac{1}{2}\left|ab\left(s^2(r-1)-r^2(s-1)+(s-r)\right)\right|$

Answer: D

Watch Video Solution

Exercise 122

1. If the area of the triangle whose vertices are (b, c) (c, a) (a, b) is p then the area of the triangle whose vertices $(ac - b^2, ab - c^2)(ab - c^2, bc - a^2)$ and $(bc - a^2, ac - b^2)$ is

A. $(a + b + c)^2$

B. $p(a + b + c)$

C. $p(a + b + c)^2$

D. none

Answer: C

Watch Video Solution

Exercise 123

1. If G is the centroid of ΔABC and if area of ΔAGB is 5 sq.unit. then the area of ΔABC is

A. 20 sq.unit

B. 10 sq.unit

C. 15 sq.unit

D. 25 sq.unit

Answer: C

Watch Video Solution

Exercise 124

1. If the centroid of a triangle is (1, 4) and two of its vertices are (4, -3), (-9, 7), then the area of the triangle is

A. $180/3$ sq.unit

B. $183/2$ sq.unit

C. $174/3$ sq.unit

D. $197/2$ sq.unit

Answer: B

Watch Video Solution

Exercise 125

1. If G is the centroid of the triangle formed by A(6, 1), B(3, 5), C(-1, -1), then the area of ΔGAB is

A. $19/3$ sq.unit

B. $13/2$ sq.unit

C. $17/3$ sq.unit

D. $17/2$ sq.unit

Answer: C

Watch Video Solution

Exercise 126

1. P(3, 1), Q(6, 5) and R(x, y) form a triangle where $\angle PQR = 90^\circ$ and area of $\Delta RPQ = 7$. Then the number of such points R is

A. 0

B. 1

C. 2

D. 3

Answer: C

Watch Video Solution

Exercise 127

1. P, Q, R are the midpoints of AB, BC, CA of ΔABC and the area of ΔABC is 20. The area of ΔPQR is

A. 4

B. 5

C. 6

D. 8

Answer: B

Watch Video Solution

Exercise 128

1. If the area of the triangle formed by joining the midpoints of the sides of ΔABC is 5 sq.unit, then the area of ΔABC is

A. 40 sq.unit

B. 20 sq.unit

C. 10sq.unit

D. 50 sq.unit

Answer: B

Watch Video Solution

Exercise 129

1. If D, E, F are the midpoints of the sides $\overline{BC}, \overline{CA}, \overline{AB}$ of ΔABC where A =(-3, 4), B = (-1, -2), C = (5, 6) then the area of $\Delta DEF =$

A. $19/3$ sq.unit

B. $13/2$ sq.unit

C. $17/3$ sq.unit

D. $17/2$ sq.unit

Answer: B

Watch Video Solution

Exercise 130

1. If Δ_1 is the area of the triangle formed by the centroid and two vertices of a triangle, Δ_2 is the area of the triangle formed by the midpoints of the sides of the given triangle then $\Delta_1 : \Delta_2 =$

A. $3:4$

B. $4:1$

C. $4:3$

D. $2:1$

Answer: C

Watch Video Solution

Exercise 131

1. If A(6, 3), B(3, 5), C(4, 2), P(α, β), then the ratio of the areas of the triangles PBC, ABC is

A. $|\alpha + \beta| : 7$

B. $|\alpha - \beta| : 7$

C. $|\alpha + \beta + 2| : 7$

D. $|3\alpha + \beta - 14| : 7$

Answer: D

Watch Video Solution

Exercise 132

1. If A(6, 3), B(-3, 5), C(4, -2), D(x, 3x) are four points and the magnitude of the area of ΔABC is twice the area of ΔDCB then $x =$

A. $3/8$

B. $-3/8$

C. $11/8$

D. none

Answer: B

Watch Video Solution

Exercise 133

1. If $A=(-3,4), B(-1,-2), C(5,6), D(x,-4)$ are the vertices of a quadrilateral such that area of $\Delta ABD=2[\text{Area of } \Delta ACD]$ then $x=$

A. 6

B. 9

C. 69

D. 96

Answer: C

Watch Video Solution

Exercise 134

1. The point A divides the join of P(-5, 1) and Q(3, 5) in the ratio k : 1. The values of k for which the area of ΔABC where B(1, 5), C(7, -2) is 2 sq.units is

A. $7, 31/9$

B. $-7, 31/9$

C. $7, \ -31/9$

D. $-7, \ -31/9$

Answer: A

Watch Video Solution

Exercise 135

1. Let A(h, k), B(1, 1) and C(2, 1) be the vertices of a right angled triangle with AC as its hypotenuse. If the area of the triangle is 1, then the set of values which k can take is given by

A. {1, 3}

B. {0, 2}

C. {-1, 3}

D. {-3, -2}

Answer: C

Watch Video Solution

Exercise 136

1. If $A(x_1, y_1), B(x_2, y_2)$ then the circumradius of ΔOAB is

A. $\frac{OA \cdot OB \cdot AB}{|x_1y_2 \quad x_2y_1|}$

B. $\frac{OA \cdot OB \cdot AB}{2|x_1y_2 - x_2y_1|}$

C. $\frac{OA \cdot OB \cdot AB}{4|x_1x_2 \quad x_2y_1|}$

D. none

Answer: B

Watch Video Solution

Exercise 137

1. If A = (1, 2), B (2, 3) then the circum radius of ΔOAB is

A. $\sqrt{130}$

B. $\frac{1}{2}\sqrt{130}$

C. $2\sqrt{130}$

D. $\sqrt{65}$

Answer: B

Watch Video Solution

Exercise 138

1. If O(0, 0), A(3, 4), B(4, 3) are the vertices of a triangle then the length of the altitude from O is

A. $4\sqrt{2}$

B. $7\sqrt{2}$

C. $7/\sqrt{2}$

D. $7/2\sqrt{2}$

Answer: C

Watch Video Solution

Exercise 139

1. a, b, c are in A.P. and x, y, z are in G.P. The points (a, x), (b, y), (c, z) are collinear if

A. $x^2 = y$

B. $x = z^2$

C. $y^2 = z$

D. $x = y = z$

Answer: D

Watch Video Solution

Exercise 140

1. If $(k, 2-2k), (-k+1, 2k), (-4-k, 6-2k)$, are collinear, then k =

A. 2

B. 5

C. $1/2, \ -1$

D. $-1/2, 2$

Answer: C

Watch Video Solution

Exercise 141

1. If the area of the triangle formed by the points (t, 2t), (-2, 6), (3, 1) is 5 sq.unit, then t is

A. $1/2, 2$

B. $2, 2/3$

C. $-77, 83$

D. $1/2, \ -1$

Answer: B

Watch Video Solution

Exercise 142

1. If the area of the triangle formed by the points (1, 2), (2, 3), (x, 4) is 40 sq.unit, then x is

A. $1/2, 2$

B. $2, 2/3$

C. $-77, 83$

D. $1/2, \ -1$

Answer: C

Watch Video Solution

Exercise 143

1. The area of the triangle formed by $(0, 0), \left(a^{x^2}, 0\right), \left(0, a^{6x}\right)$ is $1/2a^5$ sq.unit then x =

A. 1 or 5

B. -1 or 5

C. 1 or -5

D. $-1 \text{ or } -5$

Answer: D

Watch Video Solution

Exercise 144

1. If the area of the triangle with vertices (2a,a) (a, a), (a, 2a) is 18 sq.units then the circumcentre of the triangle is

A. (3, 3)

B. (6, 6)

C. (9, 9)

D. (0, 0)

Answer: C

View Text Solution

Exercise 145

1. The area of the quadrilateral formed by the points (1, 2), (2, -3), (-2, 4), (0, 5) is

A. 10 sq.unit

B. 15 sq.unit

C. 18 sq.unit

D. 20 sq.unit

Answer: A

Watch Video Solution

Exercise 146

1. If (-1, 2), (4, 1), (7, 16) are the three vertices of a parallelogram taken in order, then the fourth vertex and also the area of the parallelogram are

A. (-4, 3), 16 sq.unit

B. (2, 17), 78 sq.unit

C. (-8, 3), 24 sq.unit

D. (10, -5), 36 sq.unit.

Answer: B

Watch Video Solution

Exercise 2 Special Type Questions

1. I : The points (2, -2), (-1, 2), (3, 5) are the vertices of a right angled isoceles triangle.

II : The points (2, -4), (4, -2), (7, 1) form an isosceles triangle.

A. only I is true

B. only II is true

C. both I and II are true

D. neither I nor II are true

Answer: A

Watch Video Solution

2. I : If O is the origin and if $A(x_1, y_1), B(x_2, y_2)$ are two points then $OA \cdot OB \cdot \cos\angle AOB = x_1x_2 + y_1y_2$

II. If O is the origin and if $A(x_1, y_1), B(x_2, y_2)$ are two points then $OA \cdot OB \cdot \sin\angle AOB = x_1x_2 + y_1y_2$

A. only I is true

B. only II is true

C. both I and II are true

D. neither I nor II are true

Answer: A

View Text Solution

3. I : The points (2, 5), (0, 3), (2, 1), (4, 3) taken in order form a square.

II : The points $(-a, -b), (0, 0), (a, b), (a^2, ab)$ are collinear.

A. only I is true

B. only II is true

C. both I and II are true

D. neither I nor II are true

Answer: C

Watch Video Solution

4. The arrangment of the following distances between the points in ascending order is

$(A) P(0, 0), Q(1, 1) \quad (B) P(0, 1), Q(0, 5) \quad (C) P(3, 0), Q(8, 0) \quad (D) P($

A. A, D, B, C

B. A, B, C, D

C. B, A, C, D

D. D, C, B, A

Answer: A

Watch Video Solution

5. The arrangement of the areas of triangles formed by the following points in ascending order is

$(A) P(0, 0), Q(4, 0), R(0, 3)$ $(B) P(0, 0), Q(5, 0), R(0, 2)$

$(C) P(0, 0), Q(0, 5), R(6, 0)$ $(D) P(3, 0), Q(0, 6), R(0, 0)$

A. A, B, C, D

B. B, A, C, D

C. B, A, D, C

D. D, C, B, A

Answer: C

Watch Video Solution

6. Arrangement of the areas of the quadrilaterals formed by the following points in ascending order is

$(A) P(0, 0), Q(3, 5), R(1, 1), S(4, 5)$ $(B) P(0, 0), Q(4, 0), R(0, 6), S(1, 1$

$(C) P(0, 0), Q(7, 6), R(5, 3), S(5, 7)$

A. A, C, B

B. B, A, C

C. C, A , B

D. B, C, A

Answer: A

Watch Video Solution

7. If A = (0, 0), B = (3, 0), C = (0, 4) are the vertices of a triangle then match the following

I. Centroid	$(a)(1, 1)$
II. Orthocentre	$(b)(1, 4/3)$
III. Circumcentre	$(c)(0, 0)$
IV. Incentre	$(d)(4, 5)$
	$(e)(3/2, 2)$

A. a, b, c, d

B. a, b, d, e

C. b, c, e, a

D. c, d, e, b

Answer: C

View Text Solution

8. Match the following

Vertices of the triangle	Nature of the triangle
I. (0, 0), (1, 3), (-1,- 3)	(a) Right angled triangle
II. (3,4), (3, 5), (6, 5)	(b) Isosceles triangle
III. (4, 3), (-2, 3), (1, -2)	(c) Collinear

A. c, b, a

B. c, a, b

C. a, b, c

D. a, c, b

Answer: B

Watch Video Solution

9. In the triangle which vertices at A(6, 3), B(-6, 3) and C(-6, -3), the median through A meets BC at P, the line AC meets the x-axis at Q, while R and S respectively denote the orthocentre and centroid of the triangle. Then the correct matching of the coordinates of points in List-I to List-II is

List-I	List-II
$(i)P$	$(A)(0, 0)$
$(ii)Q$	$(B)(6, 0)$
$(iii)R$	$(C)(-2, 1)$
$(iv)S$	$(D)(-6, 0)$
	$(E)(-6, -3)$
	$(F)(-6, 3)$

A.

(i)	(ii)	(iii)	(iv)
D	A	E	C

B.

(i)	(ii)	(iii)	(iv)
D	B	E	C

C.

(i)	(ii)	(iii)	(iv)
D	A	F	C

D.

(i)	(ii)	(iii)	(iv)
B	A	F	C

Answer: C

Watch Video Solution

10. A : The orthocentre of the triangle having vertices as (2, 3), (2, 5), (4, 3) is (2, 3)

R : Orthocentre of a right angled triangle is midpoint of a hypotenuse.

A. A true, R true and R is correct explanation of A

B. A true, R true but R is not the correct explanation of A

C. A is true but R is false

D. A is false but R is true

Answer: C

Watch Video Solution

11. A : If the midpoints of the sides of a triangle are (1, 0), (0, 1), (1, 1) then the centroid is $(2/3, 1)$.

R : Centroid of the triangle is same as centroid of triangle formed by their midpoints.

A. both A and R are true and R is the correct explanation of A

B. both A and R are true and R is not the correct explanation of A

C. A is true but R is false

D. A is false but R is true

Answer: D

Watch Video Solution

12. A : The maximum area of the triangle formed by the points (0, 0), $(a\cos\theta, b\sin\theta), (a\cos\theta, -b\sin\theta)$ is $\frac{1}{2}|ab|$.

R : Maximum value of $\sin\theta$ is 1.

A. A is false but R is false

B. A is true but R is false

C. both A and R are true and R is the correct explanation of A

D. both A and R are true and R is not the correct explanation of A

Answer: D

Watch Video Solution