Instructions
Section A - 8
Section B - 3
Section C - 4
Section D - 3
Section E - 4
Section F - 8

Duration: 75 Minutes

Each question carries two marks

Section A

^^ The set equation $(A')' = A$ is described by which law of algebra of sets?
@@ Idempotent law
@@ DeMorgan's law
@@ Involution law
@@ Complement law ~

^^ The set builder form of A = (3, 8) is
@@ {x:3 ≤ x < 8}
@@ {x:3 < x < 8} ~
@@ {x:3 < x ≤ 8}
@@ {x:3 ≤ x ≤ 8}

^^ The number of elements in the Power set P(S) of the set S = {1, 2, 3 } is

@@ 8 ~

@@ 4

@@ 2

@@ 9

^^ If A and B are sets and $A \cup B = A \cap B$, then

@@ A = ∅

@@ B = ∅

@@ A = B ~

@@ A ≠ B

^^ Given that A and B are sets. Then $A \cup B = B$ If and only if

@@ $B \subset A$

@@ $A = B^c$

@@ $A \subset B$ ~

@@ $A^c = B$

^^ Given that A and B are sets. Then$A \cap B = B$ If and only if

@@ A = B

@@ $A = B^c$

@@ $A \subset B$

@@$B \subset A$

^^ The expression $A \Delta \varnothing$ is equal to

@@ A ~

@@ $\varnothing$

@@ $A \Delta A$

@@ $A \cup \varnothing$

@@ $A \cap B \Delta C$

^^ The expression $A \cap \varnothing$ is equal to

@@ A

@@ $\varnothing$~

@@ $A \Delta A$

@@ $A \cup \varnothing$

^^ The expression $A \cup (B \Delta C)$ is equal to

@@$(A \cup C) \Delta (A \cup C)$ ~

@@ $A \cap (B \Delta C)$

@@$(A \Delta B) \cap (A \Delta C)$

@@ $(A \setminus B) \cap (A \setminus C)$

^^ The expression $A \setminus (B \cup C)$ is equal to

@@ $(A \setminus B) \cap (A \setminus C)$

@@ $(A \setminus B) \cup C$

@@ $(A \setminus B) \cap (A \cup C)$

@@ $(A \setminus B) \cup (A \setminus C)$ ~

^^ The expression $A \cap (B \cup C)$ is equal to

@@ $(A \cap B) \cap (A \cap C)$

@@ $(A \setminus B) \cup C$

@@ $(A \setminus B) \cap (A \cup C)$

@@ $(A \cap B) \cup (A \cap C)$ ~

^^ For a family of sets $\{A_i\}$ if $A_i \cap A_j = \varnothing$ for $i \neq j$,then the sets are

@@ equivalence
@@ pairwise disjoint ~
@@ equal
@@ empty

^^ Which one is the property of a finite sets
@@ is equivalent to a proper subset of itself
@@is not equivalent to a proper subset of itself ~
@@is equivalent to itself
@@ none
^^ Which one of the statement express the De Morgan's law
@@ $A^C \cap B^C = (A \cap B)^c$
@@ $(A \cup B)^c = A^C \cap B^C$~
@@ $A^C \cup B^C = A \cap B$
@@ $A \cup B = A^C \cap B^C$

^^ The number of elements in the power set of the set {a, b,c, d, e} is

@@ 15

@@ 32 ~

@@ 31

@@ 10

^^ If A = {m, n, p}, which of the following is true?

@@ $p < m$

@@ $m \subset A$

@@ $m \in A$ ~

@@$A^c = \varnothing$

^^ If two sets A and B are comparable then which of the below statement(s) is /are not correct?

(I) $A \subset B$ (II) $B \subset A$ (III) $A = B$ (IV) $A \cup B = A \cap B$

@@ I only

@@ I, II only

@@ III only

@@ IV only ~

^^ Let M = {p, q, r s}. Find n(p(M))

@@16 ~

@@ 8

@@ 4

@@ 32

^^ Which of the following does not represent a set?

@@ A = {p, q, t}

@@ A = {}

@@ A = {a, b, b, d, d, d} ~

@@ N = $\{t:t^2 - 9 = 0, t \in R\}$

^^ The number of elements of the power set of a set of order n is

@@ n

@@ 2n

@@ n^2

@@ 2^n ~

^^ The number of elements in the Power set P(S) of the set S = { 1, 2} is

@@ 8

@@ 4~

@@ 2

@@ 9

^^ Which of the following sets is a null set?
I. X = {x | x = 9, 2x = 4 }
II. Y = {x |x = 2x, x ≠ 0 }
III. Z = { x | x - 8 = 4 }

@@ I and II only ~

@@ I, II and III

@@ I and III only

@@ II and III only

^^ Let P(S) denote the power set of set S. Which of the following is always true ?

@@ $P(P(S)) = P(S)$

@@ $P(S) \cap S = P(S)$

@@ $P(S) \cap P(P(S)) = \{\emptyset\}$ ~

@@ S is not an element of P(S)

^^ The expression $A \cap (B \cup C)$ is equal to
@@$(A \cap B) \cup (A \cap C)$ ~
@@ $(A \cap B) \cup C$
@@$(A \cap B) \cap (B \cap C)$
@@$(A \cup B) \cup (A \cap C)$
^^ The property of the set $A \cap (A \cup B) = A$ and $A \cup (A \cap B) = A$ is called

@@ Absorption~

@@ Commutative

@@ De-Morgan

@@ Distributive

^^ The set $(A \cap B)' \cap C'$ is the same as

@@ $(A \cup C)' \cup (B \cup C)'$~

@@$(A \cap B)' \cap (B \cup C)'$

@@$(A \cup C)' \cap (B \cup C)'$

@@ $(A' \cup C') \cup (B' \cup C')$

^^ Determine the total number of subsets of the following set: {h, i, j, k, l, m, n}

@@ 128 ~

@@ 64

@@ 32

@@ 14

^^ Determine the total number of subsets of the following set: { i, j, k, l, m, n}

@@ 128

@@ 64 ~

@@ 32

@@ 14

^^ Which of these subsets are equal:

$$A = \{r,t,s\},\ B = \{s,t,r,s\},\ C = \{t,s,t,r\},\ D = \{s,r,s,t\}$$

@@ A and B

@@ A and C

@@ B and D

@@ All are equal ~

^^ In a Venn diagram, the overlap between two circles represents:

@@ the union of two sets

@@ the intersection of two sets ~

@@ the elements that are in either of two sets

@@ the difference between the number of elements in two sets

^^ A and B are two sets, $A \cap B$ represents:

@@ all elements in either A or B

@@ all elements in both A and B ~

@@ all elements that are in A but not B

@@ all sets that include A and B

^^ A and B are two sets, $A \cup B$ represents:

@@ all elements in either A or B ~

@@ all elements in both A and B

@@ all elements that are in A but not B

@@ all sets that include A and B

^^ If A and B are two sets, A \B represents:

@@ all elements in either A or B

@@ all elements in both A and B

@@ all elements that are in A but not B ~

@@ all sets that include A and B

^^ Which of the following is not a subset of {b, c, d}?

@@ { }

@@ {a}

@@ {b, d, c }

@@ {{}} ~

SECTION B

^^ Given that T = {y:y^2 = 9 and y is even}. Then which of the following is correct?

@@ n(T) = ∅ ~

@@ n(T) = {3}

@@ n(T) = {- 3}

@@ n(T) = {- 3, 3}

^^ If Y = {t:t^2 - 4 = 0, t∈R}, D = {x:x^2 + 6 = 7, x ∈ N}, then Y∪D is given by

@@{-2, -1}

@@ {-2, -1, 1, 2} ~

@@ {-2, -1, 1}

@@ {2, -1}

^^ If Y = {t:t^2-4=0, t∈R}, D = {x:x^2+6=7, x∈N}, then Y ∩ Dis given by

@@ {2}

@@ {-2}

@@ {-1}

@@{ } ~

^^ If Y = {t:t^2-4=0, t∈R}, D = {x:x^2+6=7, x∈N}, then Y - D is

@@{-2, 2} ~

@@{ }

@@{-1}

@@ {1}

^^ If M = {a, b, c, r} and N = {p, q, r, a}, find M\N

@@ {c, p, q}

@@ {a, c, p, q}

@@ {b, c, p, q}

@@{b, c} ~

^^ Let M = {4,2}, N = {3, 5,6} and P = {8,7,3}. What are the elements of M ∪ N\P?

@@{2,3, 4, 5, 7, 8}

@@ {2, 4, 5, 6, 7, 8}

@@{2, 3, 5, 6, 8}

@@ {2, 4,5, 6}~

^^ Let M = {2,3,6}, N = {3, 5,6} and P = {6,4,3}. Elements of {M∩N∩P} are

@@{2,3, 4, 5, 7, 8}

@@ {3}

@@ 3, 6 ~

@@ {3, 6}

^^ Let M = {4,2,3}, N = {3, 5,6,8} and P = {8,7,3}. Elements of {(M∪N)∩P} are

@@{2,3, 4, 5, 7, 8}

@@ {3, 8}

@@{ 6, 8}

@@ 3, 8 ~

^^ Let M = {4,2,3}, N = {3, 5,6,8} and P = {8,7,3}. The sets {(M∩N)∪P}?

@@ N

@@ P~

@@ M

@@ {2, 3}

^^ If A = {1, 2, 3} and B = {1, 4, 5}, then B\A is

@@ Ø

@@ {2, 3, 4}

@@ {2, 3}

@@ {4, 5}~

^^ If A = {3, 4, 5,6, } and B = {7,4, 9} then B ∪ A\B

@@ {4,7,9}

@@ {3,4,7}

@@ {3, 5, 6, 7, 9}

@@ { 3, 4, 5, 6,7,9}~

^^ If the ordered pairs (y, -8) and (6, 2x) are equal then (x, y) is

@@ (-4, 6) ~

@@ (6, -3)

@@ (-4, 8)

@@ (-2, -3)

Section C

^^ In a room containing 28 people, there are 18 people who speak English, 15 people who speak Hindi and 22 people who speak French, 9 persons speak both English and Hindi, 11 persons speak both Hindi and French whereas 13 persons speak both French and English. How many people speak all the three languages?

@@ 8

@@ 6 ~

@@ 7

@@ 9

^^ In a beauty contest, half the number of experts voted for Mr. A and two thirds voted for Mr. B. 10 voted for both and 6 did not vote for either. How many experts were there in all?

@@ 18

@@ 24 ~

@@ 36

@@ 9

^^ Let n(A) denotes the number of elements in set A. If n(A) = p and n(B) = q, then how many ordered pairs (a, b) are there with a $\in$ A and b $\in$ B ?

@@ p^2

@@ pq ~

@@ p + q

@@ 2pq

^^ There are 8 students on the curling team and 12 students on the badminton team. What is the total number of students on the two teams if three students are on both teams?

@@ 20

@@ 17~

@@ 15

@@ 14

^^ LetA and B be finite sets and Uis the universal set then n(A $\cup$ B) is equal to:
@@ n(U) −n(A) −n(B)
@@ n(A) + n(B)
@@ n(U) − (n(A) −n(A $\cap$ B))
@@ n(A) + n(B) −n(A $\cap$ B) ~

^^ In a recent survey of 600 students in Ahmadu Bello University, Zaria, 200 students were recorded as fans of Manchester United, 193 as Arsenal's fans and 50 students are fans of both Manchester United and Arsenal. How many students are neither fans of the two clubs?

@@ 157

@@357

@@257 ~

@@292

^^ In a recent survey of 600 students in Ahmadu Bello University, Zaria, 200 students were recorded as fans of Manchester United, 193 as Arsenal's fans and 50 students are fans of both Manchester United and Arsenal. . How many students are fans of only Arsenal?

@@ 150 ~

@@ 200

@@ 50

@@ 250

^^ In a recent survey of 600 students in Ahmadu Bello University, Zaria, 200 students were recorded as fans of Manchester United, 193 as Arsenal's fans and 50 students are fans of both Manchester United and Arsenal. How many students are fans of Manchester United or Arsenal?

@@ 150

@@ 443

@@ 343~

@@ 293

^^ In a class of 40 students, 30 take agric., 20 take physics, if 8 students take neither agric nor physics. Find the number of students who take agric.
@@ 8
@@ 12 ~
@@ 13
@@ none
^^ Two sets A and B are given, Let U be the universal set containing them, let the number of the sets be given by n(A) = 11 , n(B) = 6 and n(U) = 15 Find the smallest possible value of n(A∩B)
@@ 2 ~
@@ 0
@@ 8
@@ 4

Section D

^^ If the ordered pairs $(\frac{x}{2}, 5)$ and $(3, \frac{7}{y})$ are equal, then the values of x, y are respectively

@@ $6, \frac{7}{5}$ ~

@@ $6, \frac{5}{7}$

@@ $\frac{7}{5}, 6$

@@ $\frac{5}{7}, 6$

^^ If set X has m elements and set Y has n elements, the number of elements in

X×Y is given by

@@ m×n ~

@@ m^n

@@ 2^n

@@ n^m

^^ The Cartesian product of M = {1, 2} and N = {5,3,6} is given by

@@{(1,5), (1,3). (1, 6), (2, 3), (2,6)}

@@ {(5,1), (3,1), (6,1), (3,2), (6,2)}

@@{(2,5), (1,5), (2,3), (1,3), (1,6), (2,6)} ~

@@ {(5,1), (3,2), (3,1), (6,1), (5,2), (6,2)}

^^ If A = (1, 2, 3, 4). Let R = ((1, 2), (1, 3), (4, 2)). Then R is

@@ not anti-symmetric

@@ not transitive ~

@@ reflexive

@@ symmetric

^^ If A = {1, 2, 3} then relation S = {(1, 1), (2, 2), (3,3)} is

@@ transitive only

@@ anti-symmetric only

@@ reflexive ~

@@ an equivalence relation

^^ If M = {1,2} and N = {1,3,5}, which of the following is/are not relation(s) from M to N?

(I) {(1,1)} (II) {(1,3), (1,5)} (III) {(3,2), (1,3)}, (IV) [(1,3), (2,1)]

@@I only

@@ I and II only

@@ III only ~

@@ III and IV only

^^ Let R be a relation on X = {1, 2, 3, 4}, such that xRy if and only if x–y = 3k, for some

integer k and x, y ∈ X, then R^{-1} is
@@ {(1 , 1), (1 , 4), (2 , 2), (3 , 3), (4 , 1), (4, 4)} ~
@@ {(1 , 1), (2 , 2), (3 , 3), (4 , 4)}
@@ {(1 , 1), (2 , 4), (3 , 3), (4 , 4)}
@@{(1 , 2), (2 , 1), (1 , 3), (3 , 1), (1, 4), (4 , 1)}

^^ Given that R = {(-1, 0), (6,-3), (4, 5)} the image of R is

@@ {-3, -1, 1,5}

@@ {-3, -1, 0, 1, 5}

@@ {0, -3, 5} ~

@@ { -3, -1 , 0, 6}

^^ Let A = {1,2,3}, which of the following relations on A defines a function?
@@ {(1, 3),(2, 3),(3, 1)} ~
@@ {(1, 2),(3, 1)}
@@ {(1, 3),(2, 1),(1, 2),(3, 1)}
@@ {(2, 3),(2, 1),(3, 2)}
^^ Which of the expression is equal to A×(B ∪ C)
@@ (A×B) ∪ (A×C) ~
@@ (A×B) ∪ C
@@ A×B ∪ C
@@ (A×B) ∩ (A×C)
^^ Which of the sets define A×B
@@ {(x,y):x∈A and y∈B} ~
@@ {(x,y):x∈A or y∈B}
@@ {x,y :x∈A and y∈B}
@@ none of the above

^^ What is the mathematical expression A △ B called
@@ symmetric difference ~
@@ symmetric sets
@@ symmetric expression
@@ symmetric expansion

^^ Let A = {2,4,6} and B = {4,6,8,10}, and define a relation R on A and B by (x, y)∈ R if and only if 'x' is a factor of 'y'. R has how many elements?

@@ 7

@@6 ~

@@14

@@5

SECTION E

^^ Which of the following is not a prime number?

@@ 11

@@ 21 ~

@@ 31

@@ 41

^^ Which of the following represents numbers greater than -3 but less than 6?

@@ {x : -3 > x > 6}

@@ {x: -3 ≥ x ≥ 6}

@@ {x: -3 < x < 6} ~

@@ {x: -3 ≤ x ≤ 6}

^^ The interval satisfying the inequality $2 \le 2x - 6 \le 12$ is

@@ (1, 5)

@@ [4, 9]

@@ [-1, 6]

@@ [3, 12)

^^ Which of the following statements is true?

@@ 0.81 is a rational number ~

@@ 2/3 is not a rational number

@@ $\sqrt{2}$ is a rational number

@@ $\sqrt{7}$ is a rational number

^^ If N, Z, and Q respectively represent the sets of natural, integers and rational numbers, which of the following relations is not true?

@@ $N \subset Z$

@@ $N \cup Z \subset Q$

@@ $Q \subset Z$ ~

@@ $N \cup Z \subset Z$

^^ which one of the following is the set of rational numbers Q

@@ $\left\{\frac{m}{n} : m,n \in Z,\ n \neq 0\right\}$ ~

@@ $\left\{\frac{m}{n} : m,n \in Z, \right\}$

@@ $\left\{\frac{m}{n} : m,n \in R, \ n \neq 0\right\}$

@@ $\left\{\frac{m}{n} : m,n \in Q, \right\}$

^^ Which of the expression gives the set of real numbers

@@ N ∪ Q∪ Z ~

@@ Q ∪ Z

@@ N - Q∪ Z

@@ none

^^ Which of the following is not a property of integers?

@@ Closure with respect to division ~

@@ Closure with respect to addition

@@ Closure with respect to multiplication

@@ Closure with respect to subtraction

^^ Let N, R, Z, Q are the set of natural numbers, real numbers, integers, and rational numbers respectively. Which of the following options is not correct?

@@ N ⊂ R ⊂ Z ~

@@ N ⊂ Z ⊂ Q

@@ N ⊂ Q ⊂ R

@@ .N ⊂ Z ⊂ Q ⊂ R

^^ (-4 , 2] ∪ (-8, 0)is the same as

@@ (-8, 5)

@@ [-4, 5]

@@(-4,-2)

@@ (-8, 2] ~

^^ Let A = {x | 1 < x $\leq$ 3} and B = {x | 1 $\leq$ x < 3} be two sets of real numbers. A ∩ Bis

@@ {x | 1 $\leq$ x $\leq$ 3}

@@ {x | 1 < x < 3}~

@@ {x | 1 < x $\leq$ 3}

@@ {x | 1 ≤ x $\leq$ 3}

^^ Which of the sets has the well-ordering property
@@ the set of natural numbers ~
@@ the set of integers
@@ the set of rational numbers
@@ the set of real numbers
^^ On which of the subset of real numbers is the order axiom defined
@@ the set of positive numbers ~
@@the set of integers
@@the set of rational numbers
@@the set of complex numbers
^^ In which of the following number system does a subset satisfies the completeness axiom
@@ R ~
@@ C
@@Q
@@ R - Q
^^ Which one of the sets defines the set of irrational numbers
@@ R
@@ R - Q ~
@@Q (d) C - Q

^^ Which of the following is not an irrational number?

@@ $\sqrt{2}$

@@ $\sqrt{3}$

@@ $\sqrt{16}$ ~

@@$\sqrt{12}$

^^ Which of the following expressions is not correct?

@@ $x(-\infty) = -\infty$

@@ $x < 0 \Rightarrow x(\infty) = -\infty$

@@ $-\infty - \infty = \infty$ ~

@@ $\frac{x}{\infty} = 0$, for $x \neq 0$

^^ Which one is a transcendental number
@@ A number that does not satisfies any algebraic equation ~
@@A number that does satisfies any algebraic equation

@@A number that is a square root to any algebraic equation
@@A number that is above every number
^^ π is a number that is found whenever
@@there is an arc
@@there is a line
@@ there is a circle ~
@@none of the above
^^ Which one of the following is true
@@ $|a+b| \leq |a| + |b|$ ~
@@ $|a| + |b| \leq |a+b|$
@@ $|a+b| < |a| + |b|$
@@ $-a \leq |a| \leq a$
^^ Which one of the implication is correct
@@ $a < b, c < 0, \Rightarrow ca > cb$ ~
@@$a < b, c < 0, \Rightarrow ca < cb$
@@$a < b, c < 0, \Rightarrow a < bc$
@@ none of the above
^^ If $0 < a < b$, which of the following is true
@@ $b^{-1} < a^{-1}$ ~
@@$b^{-1} < a$
@@$b < a^{-1}$
@@none of the above
^^ Which statement is true about square roots of positive real numbers
@@It is unique ~
@@not unique
@@does not exists
@@It is unique but not a real number

Section F

^^ $\frac{2-3i}{4-i}$ in the form of x + iy, where x and y are real is

@@ $\frac{11}{17} + \frac{10i}{17}$

@@ $\frac{2}{17} - \frac{10i}{17}$

@@ $\frac{11}{17} - \frac{10i}{17}$ ~

@@ $\frac{11}{17} - \frac{3i}{17}$

^^ The modulus of 3 + 2i is

@@ $\sqrt{-13}$

@@ 13

@@ $\sqrt{13}$~

@@ $\sqrt{13}$i

^^ The principal argument of $-\sqrt{3}-i$?

@@ $\frac{5\pi}{6}$

@@ $-\frac{5\pi}{6}$ ~

@@ $\frac{3\pi}{7}$

@@ $-\frac{3\pi}{7}$

^^ The polar form of $\frac{1+3i}{1-2i}$ is given by

@@ $\sqrt{2}\left(\cos\frac{5\pi}{9}-i\sin\frac{5\pi}{4}\right)$

@@ $\sqrt{2}\left(\cos\frac{3\pi}{4}-i\sin\frac{3\pi}{4}\right)$

@@ $\sqrt{2}\left(\cos\frac{5\pi}{9}+i\sin\frac{5\pi}{4}\right)$

@@$\sqrt{2}\left(\cos\frac{3\pi}{4}+i\sin\frac{3\pi}{4}\right)$ ~

^^ Given that $z_1 = 3 + 4i$ and $z_2 = 7 - 3i$,compute $z_1 + z_2$.

@@10 - i

@@ 10 + i ~

@@3 + 7i

@@3 - 7i

^^ If $z_1 = 5 + 4i$ and $z_2 = 7 - 3i$, find the value of $z_1.z_2$

@@ 47 + 13i ~

@@ 47 - 13i

@@ 13 + 47i

@@ 13 - 47i

^^ If $z_1 = 5 + 4i$ and $z_2 = 7 - 3i$, find the value of $z_1 + z_2$

@@ 12 + i ~

@@ 12 - i

@@ 12 + 7i

@@ 47 - 13i

^^ If $z_1 = 5 + 4i$ and $z_2 = 7 - 3i$, find the value of $z_2 - z_1$

@@ 2 - 7i ~

@@ 2 + 7i

@@ -2 + 7i

@@ 7 - 3i

^^ Evaluate $\frac{1+i}{3+4i}$

@@ $\frac{7+i}{25}$

@@ $\frac{i+7}{25}$

@@ $\frac{7-i}{25}$ ~

@@ $\frac{i}{25}$

^^ Find the modulus of 1 - 2i

@@ 2

@@3

@@0

@@ 5 ~

^^ Find the argument of 1 + i

@@ $\pi/2$

@@ $\pi/4$ ~

@@ $3\pi/4$

@@ $\pi/3$

^^ Let $z = x + iy$ then z^{-1}

@@ $\frac{x}{x^2+y^2} - \frac{y}{x^2+y^2} i$ ~

@@ $\frac{x}{x^2+y^2} + \frac{y}{x^2+y^2} i$

@@ $x^{-1} + i\, y^{-1}$

@@ $\frac{x-y}{x^2+y^2}$

^^ Find the principal argument for z = i

@@ $\frac{\pi}{2}$ ~

@@ π

@@ 2π

^^ Evaluate $\frac{3+4i}{6+3i}$

@@ $\frac{2}{5} + \frac{1}{3}i$ ~

@@ $\frac{2}{5} - \frac{1}{3}i$

@@ $\frac{1}{3}i$

@@ $\frac{1}{5} + \frac{1}{3}i$

^^ Evaluate $\frac{1}{(2-i)^2}$

@@ $\frac{3}{25} + \frac{4}{25}i$ ~

@@ $\frac{2}{25} - \frac{1}{25}i$

@@ $2 - \frac{1}{25}i$

@@ $\frac{1}{25} + \frac{1}{25}i$

^^ $(\frac{4+7i}{2-3i})$ in a simplify form is

@@ (-1 + 2i)

@@ (-1-2i)

@@ (-3 + 2i)

@@ (1 + 2i) ~

^^ Simplify $(1+i)^2 + (1-i)^2$

@@ 4i

@@ 4i + 4

@@ 2 ~

@@ 2i

^^ Find real numbers x and y such that 3x + 2iy - ix + 5y = 7 + 5i

@@ (-1, 2) ~

@@(1, 2)

@@(1, -2)

@@(-2, 2)

^^ Simplify$\left(\frac{-3+2i}{1-i}\right)$

@@ $\frac{-5-i}{2}$ ~

@@ $\frac{-5+i}{2}$

@@ $\frac{5-i}{2}$

@@ $\frac{-5+i}{2}$

^^ If 2x + 4yi + 8 = 6i + 2yi - 2x for x, y $\in$ R, then (x, y) is

@@ (-5,3)

@@ (5, 3)

@@ (-2, 3) ~

@@ (-2,-3).