

Exercise 10B

Date _____
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1. If set $A = \{2, 3, 4, 5, 6\}$, state which of the following statement are true and which are false. ($A \supseteq 2 \in A$)
 - True as elements 2 belongs to the given set.
 - True as elements 5, 6 belongs to the given set.
 - False as elements 3, 4, 7 does not belong to the set A.
 - False as elements 2, 8 does not belong to the set A.
- 2.i If set $A = \{4, 6, 8, 10, 12, 14\}$, state which of the following statement are correct and which are wrong.
 - ~~False~~ False as element 5 does not belong to the set B. (Wrong)
 - True as element 12 does belongs to the given set. (Correct)
 - ~~True~~ as element 14 belongs to the given set. (Correct)
 - Wrong as element 9 does not belongs to the set B.



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True or False

3. (i) Sets $\{4, 9, 6, 2\}$ and $\{6, 2, 4, 9\}$ are not the same. False

(ii) Sets $\{0, 1, 2, 9, 4\}$ and $\{4, 0, 1, 2, 9\}$, are the same. True

(iii) Sets $\{5, 4, 3\}$ and $\{5, 4, 4, 3\}$ are the same. False

(iv) Sets $\{8, 3, 3\}$ and $\{3, 3, 8\}$ are the same. True

(v) Collection of vowels used in the word 'ALLAHABAD' from a set - True

(vi) If P is the set of letters in the 'ROOP' then $P = \{P, O, O, R, R\}$ = True

(vii) If M is the set of letters used in the word 'Mumbai', Then : $M = \{m, u, b, a, i\}$
True

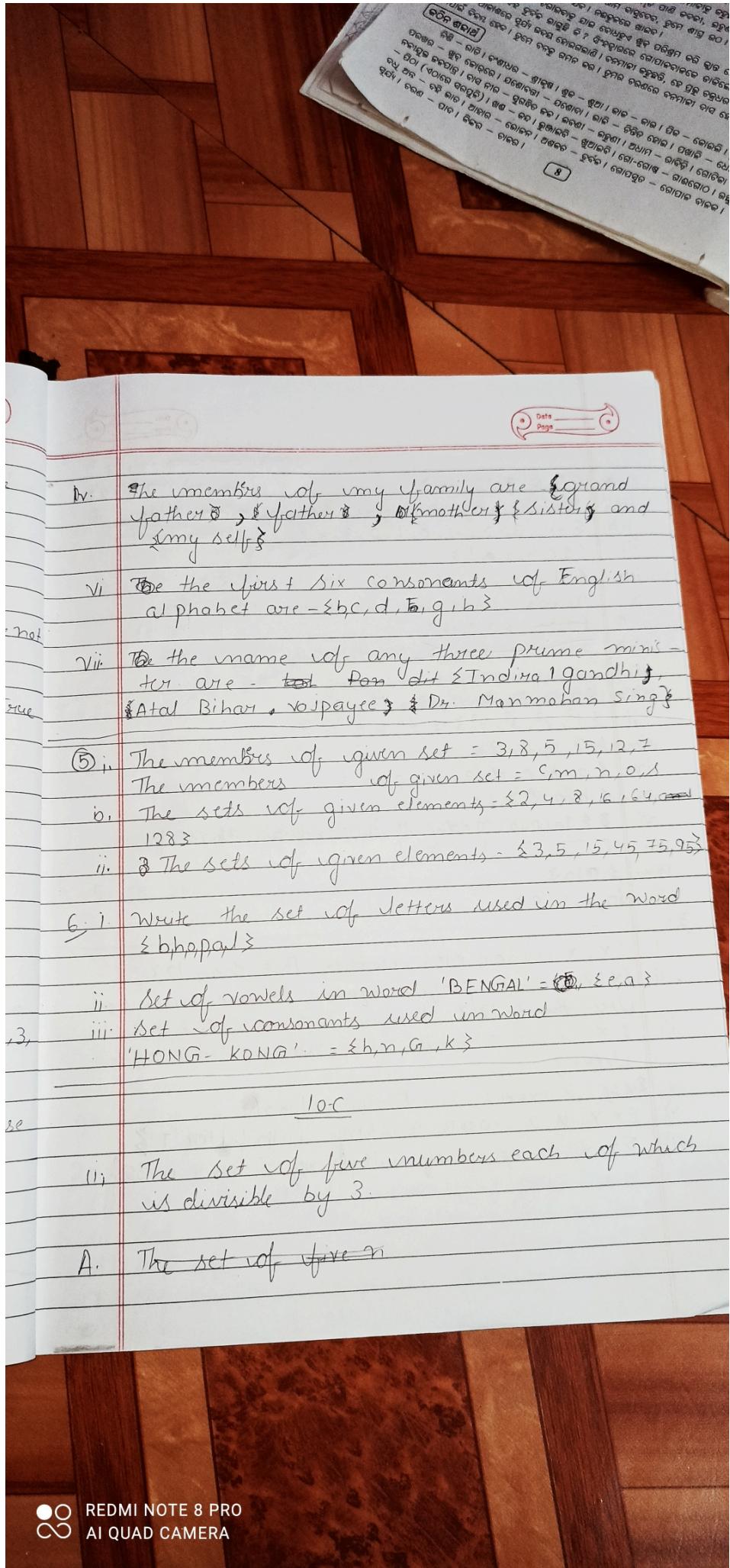
4. 1. The first five counting numbers = $\{1, 2, 3, 4, 5\}$

2. The three types of angle - {Right angle} {Obtuse angle} {Acute angle}

3. The three types of triangle - {Scalene, Isosceles, Equilateral triangles}



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1.

2.

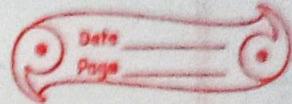
- i. $\{3, 6, 9, 12, 15\}$
ii. The set of integers between -4 and 4.
iii. $\{-4, -3, -2, -1, 0, 1, 2, 3, 4\}$
iv. $\{11, 13, 15, 17\} \cup \{12, 14, 16, 18\}$
v. Vowels used in the word 'America'
vi. $\{a, e, i, o\}$
vii. $\{m, a, d, M, a, s\} \cup \{m, d, M, s\}$

2. i. $\{2, 3, 5, 7, 11, 13, 17, 19\}$
ii. $\{1^2, 2^2, 3^2, 4^2\} = \{1, 4, 9, 16\}$
iii. $\{2, 4, 6, 8\}$
iv. $\{a, b, c, d, e, f, g, h\}$
v. $\{b, a, S, K, e, t\}$
vi. $\{\text{Jaipur}, \text{Jodhpur}, \text{Jalandhar}, \text{Shashi}\}$
vii. $\{\square, \square, \Delta, \square\}$
viii. $\{0, 0\}$
ix. $\{0, 1, 4, 9\}$

3.

- i. $\{x : x \text{ is an even number less than } 12\}$
ii. $\{x : x \text{ is a perfect square prime number less than } 12\}$
iii. $\{x : x \text{ is a month whose name starts with letter } B\}$
iv. $\{x : x \text{ is a vowel in English alphabet}\}$
v. $\{x : x \text{ is a week starting with letter } 'T'\}$
vi. $\{x : x \text{ is a set of multiple of } 5 \text{ less than } 35\}$

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29.

1. $\{1, 2, 3, 4, 6, 8, 12, 24\}$
2. $\{x : x \text{ is a natural number which divides } 24 \text{ completely}\}$
3. The Roster Form is $\{C, A, L, U, T\}$
The Set-Builder Form is $\{x : x \text{ is a letter used in the word CALCUTTA}\}$
4. The Roster Form in $\{\text{January}, \text{February}, \text{March}, \text{April}, \text{May}\}$
The Set-Builder Form is $\{x : x \text{ is name of first five months of a year}\}$
5. $\{16, 25, 36, 49, 64, 81\}$ $\{x : x \text{ is a perfect square as well}\}$