Palindromes in Mathematics

Palificio	
A. Choose the Correct Answer:	
1. Which of the following is a p	alindrome number?
a) 12321	b) 12345
c) 54312	d) 11234
2. A number is called a palindro	ome when:
a) It is divisible by 2	b) It reads the same backward and forward
c) It has odd digits only	d) All digits are different
3. Which of these is not a palin	drome number?
a) 111	b) 232
c) 32123	d) 1234
4. The smallest 3–digit palindro	ome number is:
a) 999	b) 101
c) 111	d) 100
5. Which number becomes a pa	alindrome when reversed?
a) 101	b) 121
c) 32123	d) All of the above
B. Write the Missing Terms to C	Complete the Sentences:
1. A palindrome number remair	ns the when its digits are reversed.
2. The number 787 is a	digit palindrome.
3. All palindrome numbers have	e at least digits.
4. 1221 and 3443 are examples	of numbers.
5. The reverse of 12321 is	
C. Mark each sentence with a T	rue (✔) or False (Ⅹ):
1. All numbers with repeated di	igits are palindromes.
2. A 2–digit palindrome always	has the same digit repeated.
3. 9999 is a 4-digit palindrome.	
4. Palindromes can only be odd	numbers.
5. Every number is a palindrom	e if you read it upside down.

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D. Figure out the answers to these questions:

- 1. Write any 5 palindrome numbers between 100 and 500.
- 2. Form a 4–digit palindrome using only the digits 1 and 2.
- 3. Is the number 1234321 a palindrome? Explain how you verified.
- 4. Reverse the number 15351 and check if it is a palindrome.
- 5. Create a 5–digit palindrome starting with 7.
- 6. A student says that 1010 is a palindrome. Do you agree? Justify your answer.
- 7. Find the next palindrome after 4554.
- 8. Identify whether the following numbers are palindromes or not: 444, 456, 1221, 99899, 87678.

E. Challenge yourself with these questions:

- 1. Create a secret code using palindrome numbers only and write a short message (use digits only).
- 2. Write a short story or a riddle involving a magical palindrome number.
- Convert these words into numbers (based on a code where A = 1, B = 2... Z = 26) and check if the number formed is a palindrome: "DAD", "MOM".
- 4. Can a palindrome be a prime number? Find at least two examples and write your observation.
- 5. Palindromes can be found in dates too. Write three palindromic dates in the format DDMMYYYY.