G.G.24: Negations: Determine the negation of a statement and establish its truth value

1 What is the negation of the statement “The Sun is shining”? 
1) It is cloudy. 
2) It is daytime. 
3) It is not raining. 
4) The Sun is not shining.

2 What is the negation of the statement “Squares are parallelograms”? 
1) Parallelograms are squares. 
2) Parallelograms are not squares. 
3) It is not the case that squares are parallelograms. 
4) It is not the case that parallelograms are squares.

3 What is the negation of the statement “I am not going to eat ice cream”? 
1) I like ice cream. 
2) I am going to eat ice cream. 
3) If I eat ice cream, then I like ice cream. 
4) If I don’t like ice cream, then I don’t eat ice cream.

4 A student wrote the sentence “4 is an odd integer.” What is the negation of this sentence and the truth value of the negation? 
1) 3 is an odd integer; true 
2) 4 is not an odd integer; true 
3) 4 is not an even integer; false 
4) 4 is an even integer; false

5 Which statement is the negation of “Two is a prime number” and what is the truth value of the negation? 
1) Two is not a prime number; false 
2) Two is not a prime number; true 
3) A prime number is two; false 
4) A prime number is two; true

6 Given the statement: One is a prime number. What is the negation and the truth value of the negation? 
1) One is not a prime number; true 
2) One is not a prime number; false 
3) One is a composite number; true 
4) One is a composite number; false

7 What are the truth values of the statement “Two is prime” and its negation? 
1) The statement is false and its negation is true. 
2) The statement is false and its negation is false. 
3) The statement is true and its negation is true. 
4) The statement is true and its negation is false.

8 What are the truth values of the statement "Opposite angles of a trapezoid are always congruent" and its negation? 
1) The statement is true and its negation is true. 
2) The statement is true and its negation is false. 
3) The statement is false and its negation is true. 
4) The statement is false and its negation is false.

9 Given the true statement, "The medians of a triangle are concurrent," write the negation of the statement and give the truth value for the negation.

10 Write the negation of the statement “2 is a prime number,” and determine the truth value of the negation.
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Answer Section

1  ANS: 4  REF: fall0802ge
2  ANS: 3  REF: 080924ge
3  ANS: 2  REF: 061002ge
4  ANS: 2  REF: 061202ge
5  ANS: 1  REF: 011213ge
6  ANS: 1  REF: 081303ge
7  ANS: 4  REF: 061412ge
8  ANS: 3  REF: 011506ge
9  ANS: The medians of a triangle are not concurrent. False.

   REF: 061129ge
10 ANS: 2 is not a prime number, false.

   REF: 081229ge