

**CBSE Class-11 Mathematics**  
**NCERT Solutions**  
**Chapter - 14 Mathematical Reasoning**  
**Exercise 14.1**

**1. Which of the following sentences are statements? Give reason for your answer.**

**(i) There are 35 days in a month.**

**(ii) Mathematics is difficult.**

**(iii) The sum of 5 and 7 is greater than 10.**

**(iv) The square of a number is an even number.**

**(v) The sides of a quadrilateral have equal length.**

**(vi) Answer this question.**

**(vii) The product of  $(-1)$  and 8 is 8.**

**(viii) The sum of all interior angles of a triangle is  $180^\circ$ .**

**(ix) Today is a windy day.**

**(x) All real numbers are complex numbers.**

**Ans. (i)** No month has 35 days. Thus the sentence is false declarative sentence. Hence it is a statement.

**(ii)** Here the correctness of the sentence depends upon the observer. It may be easy for someone and may be difficult for other one. Hence it is not a statement.

**(iii)** The sentence is true. Hence it is a statement.

**(iv)** Here the correctness of the sentence depends upon the number that is squared. Hence it is not a statement.

**(v)** This sentence is sometimes true and sometimes false. For example, sides in squares and

rhombuses have equal length whereas in a rectangles and trapezium, they have unequal length. Hence it is not a statement.

**(vi)** This sentence is an order. Hence it is not a statement.

**(vii)** The sentence is false declarative sentence. Hence it is a statement.

**(viii)** The sentence is true. Hence it is a statement.

**(ix)** It is not clear from the context which day is referred. Hence it is not a statement.

**(x)** The sentence is true because all real numbers can be written in the form  $a+ib$ . Hence it is a statement.

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**2. Give three examples of sentences which are not statements. Give reasons for the answers.**

**Ans. (i)** Who are you?

This sentence is an interrogative sentence. Hence it is not a statement.

**(ii)** May god bless you!

This sentence is an exclamatory sentence. Hence it is not a statement.

**(iii)** How are you?

This sentence is an interrogative sentence. Hence it is not a statement.