Related Questions with Solutions

Questions

Quetion: 01

Which of the following statements is not true ?

A. Mumbai is the capital of Rajasthan or Maharashtra.

B. $\sqrt{3}$ is a rational number or an irrational number.

C. 125 is a multiple of 7 or 8.

D. A square is a quadrilateral or a regular hexagon.

Solutions

Solution: 01

a. The component statements of " Mumbai is the capital of Rajasthan or Maharashtra" are

p : Mumbai is the capital of Rajasthan.

q : Mumbai is the capital of Maharashtra.

We note that p is false and q is true, so the compound statement is true.

b. The component statements of " $\sqrt{3}$ is a rational or an irrational number" are

$p : \sqrt{3}$ is a rational number.

$q : \sqrt{3}$ is an irrational number.

We note that p is false and q is true, so compound statement is true.

C. The component statements of "125 is a multiple of 7 or 8" are

p : 125 is a multiple of 7.

q : 125 is a multiple of 8.

We note that p and q both are false statements, so compound statement is false.

i. The component statements of "A square is a quadrilateral or a regular hexagon" are

p : A square is a quadrilateral.

q : A square is a regular hexagon.

We note that p is true and q is false. So, the compound statement is true.

Correct Options

Answer:01

Correct Options: C