

Trigonometric Functions - Class XI

Related Questions with Solutions

Questions

Question: 01

Convert 6 radians into degree measure.

- A. $343^{\circ}38'11''$
 - B. $348^{\circ}33'11''$
 - C. $433^{\circ}38'11''$
 - D. $343^{\circ}37'12''$
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Solutions

Solution: 01

We know that π radian = 180° .

$$\text{Hence, 6 radians} = \frac{180}{\pi} \times 6 \text{ degree} = \frac{1080 \times 7}{22} \text{ degree}$$

$$= 343\frac{7}{11} \text{ degree} = 343^{\circ} + \frac{7 \times 60}{11} \text{ minute} \quad [\text{as } 1^{\circ} = 60']$$

$$= 343^{\circ} + 38' + \frac{2}{11} \times 60 \text{ seconds} \quad [\text{as } 1' = 60'']$$

$$= 343^{\circ} + 38' + 10.9'' = 343^{\circ}38'11'' \text{ approximately.}$$

Hence, 6 radians = $343^{\circ}38'11''$ approximately.

Correct Options

Answer:01

Correct Options: A