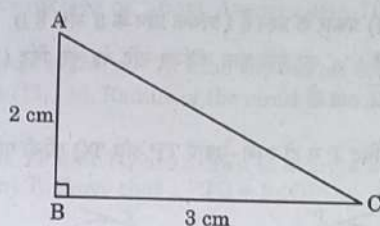




Assertion-Reason Type Questions

In Question 19 and 20, an Assertion (A) statement is followed by a statement of Reason (R). Select the correct option out of the following :

- (A) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
(B) Both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A).
(C) Assertion (A) is true but Reason (R) is false.
(D) Assertion (A) is false but Reason (R) is true.
19. **Assertion (A)** : The perimeter of $\triangle ABC$ is a rational number.
Reason (R) : The sum of the squares of two rational numbers is always rational.



20. **Assertion (A)** : Point $P(0, 2)$ is the point of intersection of y-axis with the line $3x + 2y = 4$.
Reason (R) : The distance of point $P(0, 2)$ from x-axis is 2 units.

SECTION - B

(This section comprises of Very Short Answer (SA-I) type questions. Every question is of 2 marks.)

21. Find the least number which when divided by 12, 16 and 24 leaves remainder 7 in each case.
22. A bag contains 4 red, 3 blue and 2 yellow balls. One ball is drawn at random from the bag. Find the probability that drawn ball is (i) red (ii) yellow.
23. (a) Solve the pair of equations $x = 5$ and $y = 7$ graphically.
OR
(b) Using graphical method, find whether pair of equations $x = 0$ and $y = -3$, is consistent or not.
24. (a) If $\sin \theta + \cos \theta = \sqrt{3}$, then find the value of $\sin \theta \cdot \cos \theta$.
OR
(b) If $\sin \alpha = \frac{1}{\sqrt{2}}$ and $\cot \beta = \sqrt{3}$, then find the value of $\operatorname{cosec} \alpha + \operatorname{cosec} \beta$.