CBSE Class 10 – Mathematics: Questions and Answers Chapter – 10 Circles Part 1

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Circle

Question 1:

There are   villages A, B and C such that the distance from A to B is $7\ km$, from B to C is $5\ km$ and from C to A is $8\ km$. The gram Pradhan wants to dig a well in such a way that the distance from each villages are equal. What should be the location of well? Which value is depicted by gram Pradhan?

Answer:

A, B, C will lie on the circumference of the circle and location of will be at the center of the circle. Social, Honesty, Equality.

Question 2:

People of village wants to construct a road nearest to a circular village Rampur. The road cannot pass through the village. But the people wants that road should be at the shortest distance from the center of the village

(i) which road will be the nearest to the center of village?

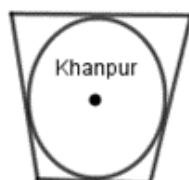(ii) which value is depicted by the people of village?

Answer:

i. Tangent of the circle

ii. Economical

Question 3:

Four roads have to be constructed by touching village Khanpur in circular shape of radius $1700m$ in the following manner.
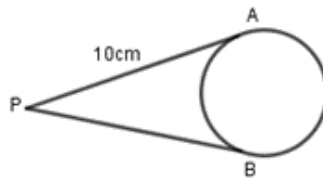
Savita got contract to construct the roads AB and CD while Vijay got contract to construct AD and BC. Prove that $AB + CD = AD + BC$. Which value is depicted by the contractor?

Answer:

Gender equality

Question 4:

Two roads starting from P are touching a circular path at A and B. Sarita ran from P to A $10\,km$ and Ramesh ran from P to B.

(i) If Sarita wins the race than how much distance Ramesh ran?

(ii) Which value is depicted?

Answer:

$10\,km$, Gender equality

Question 5:

A farmer wants to divide a sugarcane of $7\,ft$ length between his son and daughter equally. Divide it Geometrically, considering sugarcane as a line of $7\,cm$, using construction.

(i) Find the length of each part.

(ii) Which value is depicted?

Answer:

$3.5\,ft$, Gender equality.

1 Mark Questions

Question 1:

How many tangents can a circle have?

Answer:

A circle can have infinitely many tangents since there are infinitely many points on the circumference of the circle and at each point of it, it has a unique tangent.

Question 2:

The perimeter of a sector of a circle of radius $8\,cm$ is $25m$, what is area of sector?

(a) $50cm^2$

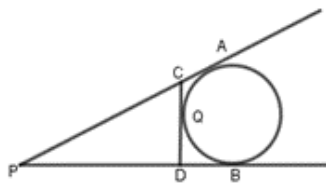(b) $42cm^2$

(c) $52cm^2$

(d) None of these

Answer:

(a) $50cm^2$

Question 3:

In figure given below PA and PB are tangents to the circle drawn from an external point P. CD is a third tangent touching the circle at Q. If $PA = 10cm$ and $DQ = 2cm$. What is length of PC ?

(a) $8\,cm$

(b) $7\,cm$

(c) $4\,cm$

(d) None of these

Answer:

(a) $8\,cm$