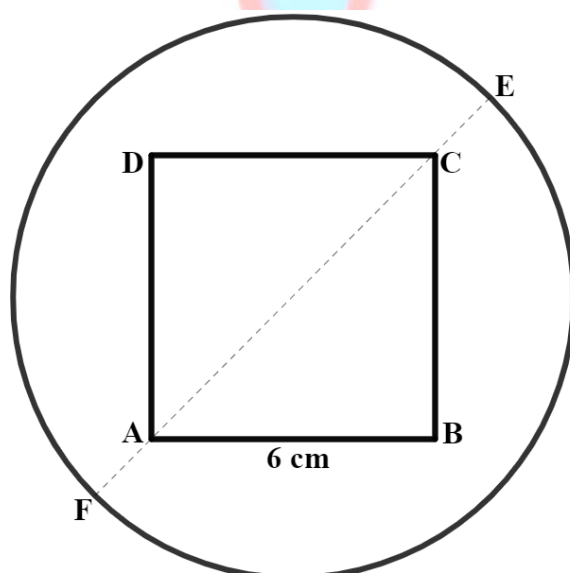


GCSE Mathematics (Grade 9-1)

Problem Solving – {Aimed at students working towards Grade 7 or 6} - (Sample 1)

1. A bag contains 6 red, 5 yellow and some white counters
The probability of picking a red counter from the bag is $\frac{3}{10}$
Calculate the probability of picking a white counter from the bag
2. Keira, Logan and Lewis shared £900 in the ratio $x : 7 : x + 5$
Lewis received £400. Calculate the value of x
3. Given that, $A = 10x^{\frac{1}{2}} - 6(x^{\frac{1}{2}} + 3y^3)$
Make x the subject of the formula
4. Given that, $x^2 + 8x - 8 = (x + 2p)^2 + 4pq$
Find the exact values of p and q
5. ABCD is a square of side 6 cm drawn inside a circle with diameter EF



The area of the circle is $72\pi \text{ cm}^2$

Calculate the distance CE.

Give your answer as an exact value.