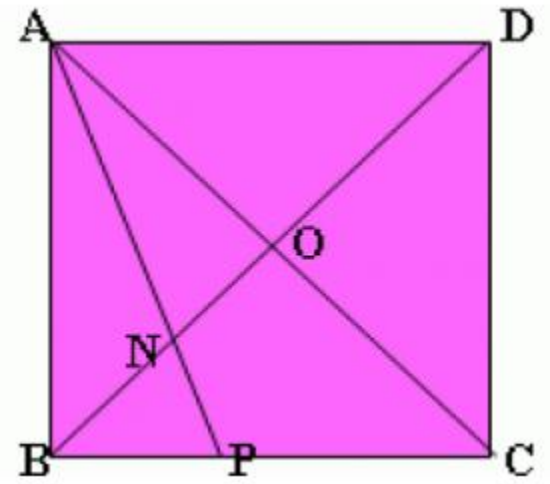
A Square Problem

Another Solution:



We are given that length of NO is 24 cm. We have to find the length of PC. Let $AO = x$ then $AC = 2x$ and $AB = BC = \sqrt{2}x$.

$$\angle OAN = \angle NAB = 22.5°.$$

From ΔOAN, we have

$$AO = x = NO \cot 22.5 = 24\left(\sqrt{2}+1\right).$$

Therefore

$$AB = BC = \sqrt{2} \times 24\left(\sqrt{2}+1\right).$$

From ΔABP, we have

$$BP = AB \tan 22.5 = \sqrt{2} \times 24\left(\sqrt{2}+1\right)\left(\sqrt{2}-1\right) = 24\sqrt{2}$$

Now

$$PC = BC - BP = \sqrt{2} \times 24\left(\sqrt{2}+1\right) - 24\sqrt{2} = 48 \text{ cm}$$

From:

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