

# 1-1.5-1

EE24BTECH11060 - Sruthi Bijili

## Question:

The centre of the circle whose end points of the diameter are  $(-6, 3)$  and  $(6, 4)$  is

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## solution:

Variable	Description	formula
<b>A</b> $(-6, 3)$	One end of the Diameter	–
<b>B</b> $(6, 4)$	other end of the Diameter	–
<b>C</b>	center of the circle	–
$k$	ratio in which <b>c</b> divides the diameter $AB$	$\frac{\mathbf{B}+k\mathbf{A}}{k+1}$

TABLE 0: Variables Used

$$k = 1 \quad (0.1)$$

$$\Rightarrow \mathbf{C} = \frac{\mathbf{A} + \mathbf{B}}{2} \quad (0.2)$$

$$\Rightarrow \mathbf{C} = \frac{\begin{pmatrix} -6 \\ 3 \end{pmatrix} + \begin{pmatrix} 6 \\ 4 \end{pmatrix}}{2} \quad (0.3)$$

$$\Rightarrow \mathbf{C} = \begin{pmatrix} 0 \\ \frac{7}{2} \end{pmatrix} \quad (0.4)$$

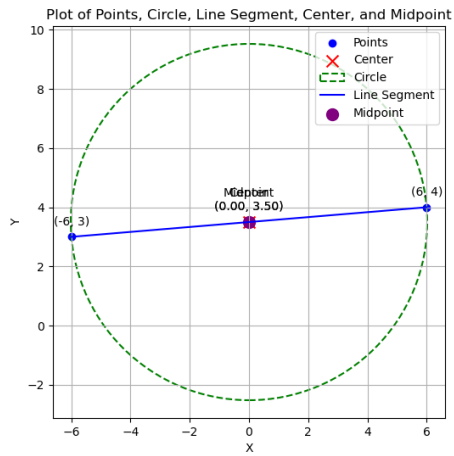


Fig. 0.1: circle with diameter AB