

**Ex 5.2**

**NCERT Solutions by Dev Anoop (Bathinda)**

⑧  $a_3 = 12$   
 $\Rightarrow a + 2d = 12 \dots \textcircled{i}$

$l = a_{50} = 106$   
 $a + 49d = 106 \dots \textcircled{ii}$

⑩ - ①  
 $a + 49d = 106$   
 $a + 2d = 12$   


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 $47d = 94$

$\Rightarrow d = \frac{94}{47}$

$\Rightarrow d = 2$

Sub. in ①

$a + 2 \times 2 = 12$

$\Rightarrow a = 12 - 4$   
 $= 8$

$a_{29} = a + 28d$   
 $= 8 + 28 \times 2$   
 $= 8 + 56$   
 $= 64$

⑨  $a_3 = 4$   
 $a + 2d = 4 \dots \textcircled{i}$

$a_9 = -8$   
 $a + 8d = -8 \dots \textcircled{ii}$

⑪ - ①  
 $a + 8d = -8$   
 $a + 2d = 4$   


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 $6d = -12$

$\Rightarrow d = \frac{-12}{6}$

$\Rightarrow d = -2$

Sub ①

$a + 2(-2) = 4$

$\Rightarrow a = 4 + 4$

$\Rightarrow a = 8$

$a_n = 0$

$a + (n-1)d = 0$

$8 + (n-1)(-2) = 0$

$\Rightarrow -2(n-1) = -8$

$\Rightarrow n-1 = \frac{-8}{-2}$

$\Rightarrow n = 4 + 1$

$\Rightarrow n = 5$

$\therefore$  5th term is 0

⑩  $a_{17} - a_{10} = 7$

$a + 16d - a - 9d = 7$

$\Rightarrow 7d = 7$

$\Rightarrow d = 1$

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