| Q.No. | DAY - 41 |
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| 240 | **Example 6.26**<br>Find the vector equation in parametric form and Cartesian equations of the line passing through $(-4,2,-3)$ and is parallel to the line $\frac{-x-2}{4}=\frac{y+3}{-2}=\frac{2z-6}{3}$. |
| 241 | **Example 6.27**<br>Find the vector equation in parametric form and Cartesian equations of a straight passing through the points $(-5,7,-4)$ and $(13,-5,2)$. Find the point where the straight line crosses the $xy$-plane. |
| 242 | **Example 6.28**<br>Find the angle between the straight line $\frac{x+3}{2}=\frac{y-1}{2}=-z$ with coordinate axes. |
| 243 | **Example 6.29**<br>Find the acute angle between the lines $\vec{r}=(\hat{i}+2\hat{j}+4\hat{k})+t(2\hat{i}+2\hat{j}+\hat{k})$ and the straight line passing through the points $(5,1,4)$ and $(9,2,12)$. |
| 244 | **Example 6.31**<br>Show that the straight line passing through the points $A(6,7,5)$ and $B(8,10,6)$ is perpendicular to the straight line passing through the points $C(10,2,-5)$ and $D(8,3,-4)$. |
| 245 | **EXERCISE 6.4**<br>3. Find the points where the straight line passes through $(6,7,4)$ and $(8,4,9)$ cuts the $xz$ and $yz$ planes. |

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| 246 | 5. Find the acute angle between the following lines.<br>(iii) $2x = 3y = -z$ and $6x = -y = -4z$. |
| 247 | 6. The vertices of $\Delta ABC$ are $A(7,2,1), B(6,0,3)$, and $C(4,2,4)$. Find $\angle ABC$ |
| 248 | 7. If the straight line joining the points $(2,1,4)$ and $(a-1,4,-1)$ is parallel to the line joining the points $(0,2,b-1)$ and $(5,3,-2)$, find the values of $a$ and $b$. |
| 249 | 8. If the straight lines $\frac{x-5}{5m+2} = \frac{2-y}{5} = \frac{1-z}{-1}$ and $x = \frac{2y+1}{4m} = \frac{1-z}{-3}$ are perpendicular to each other, find the value of $m$. |