Lines & Planes · Grade 12

Name _____ Date _____ Score _____ / 5

01 A line passes through A(5, -4) and B(-1, -2). Write its vector equation = _____

02 A line passes through A(-2, 3, 0) and B(-8, 6, -2). Write its vector equation =

_____

03

A plane has normal vector $\vec{n} = \langle -3, 1, 4 \rangle$ and passes through P(-4, -1, -2). Write its scalar equation =

_____

04

A plane has normal vector $\vec{n} = \langle 7, 2, 6 \rangle$ and passes through P(2, 6, 6). Write its scalar equation =

_____

05 Line through P(2, -2), direction $\vec{m} = \langle -7, 0 \rangle$. Write its parametric equations =

_____

Lines & Planes · Grade 12 (Answer Key)

01 A line passes through A(5, -4) and B(-1, -2). Write its vector equation =

$\vec{r} = \langle 5, -4 \rangle + t\langle -6, 2 \rangle$

02 A line passes through A(-2, 3, 0) and B(-8, 6, -2). Write its vector equation =

$\vec{r} = \langle -2, 3, 0 \rangle + t\langle -6, 3, -2 \rangle$

03

A plane has normal vector $\vec{n} = \langle -3, 1, 4 \rangle$ and passes through P(-4, -1, -2). Write its scalar equation =

-3x + y + 4z = 3

04

A plane has normal vector $\vec{n} = \langle 7, 2, 6 \rangle$ and passes through P(2, 6, 6). Write its scalar equation =

7x + 2y + 6z = 62

05 Line through P(2, -2), direction $\vec{m} = \langle -7, 0 \rangle$. Write its parametric equations =

x = 2 + -7t, y = -2 + 0t