WebAssign
Hw 2 (12.5): Equations of Lines and Planes (Homework)

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MA 261 Fall 2012, section 121, Fall 2012
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Current Score : 20 / 20 **Due :** Thursday, August 23 2012 11:00 PM EDT

1. 2.85/2.85 points | Previous Answers SCalcET7 12.5.002.MI.

Find a vector equation and parametric equations for the line. (Use the parameter t.)

The line through the point $(6, -5, 2)$ and parallel to the vector $\left\langle 1, 3, -\frac{2}{3} \right\rangle$

$\mathbf{r}(t) =$

$(x(t), y(t), z(t)) = \left(\quad \right)$

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2. 2.85/2.85 points | Previous Answers SCalcET7 12.5.004.

Find a vector equation and parametric equations for the line. (Use the parameter t.)

The line through the point $(0, 12, -6)$ and parallel to the line
$x = -1 + 4t, y = 6 - 2t, z = 3 + 8t$

$\mathbf{r}(t) =$

$(x(t), y(t), z(t)) = \left(\quad \right)$

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3. 2.85/2.85 points | Previous Answers SCalcET7 12.5.006.

Find parametric equations for the line. (Use the parameter t.)

The line through the origin and the point $(7, 5, -1)$

$(x(t), y(t), z(t)) = ($

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$)$

Find the symmetric equations.

- $\frac{x}{5} - \frac{y}{7} = -z$
- $x - 7 = y - 5 = z + 1$
- $x + 7 = y + 5 = z - 1$
- $\frac{x}{7} - \frac{y}{5} = z$
- $\frac{x}{7} - \frac{y}{5} = -z$

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4. 2.85/2.85 points | Previous Answers SCalcET7 12.5.010.

Find parametric equations and symmetric equations for the line. (Use the parameter t.)

The line through $(5, 1, 0)$ and perpendicular to both $\mathbf{i} + \mathbf{j}$ and $\mathbf{j} + \mathbf{k}$

$(x(t), y(t), z(t)) = ($ $)$

The symmetric equations are given by

- $x + 5 = -(y + 1), z = 0.$
- $-(x - 5) = y - 1 = z.$
- $x - 5 = y - 1 = -z.$
- $x - 5 = -(y - 1) = z.$
- $x + 5 = -(y + 1) = z.$

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5. 2.85/2.85 points | Previous Answers SCalcET7 12.5.017.

Find a vector equation for the line segment from (2, −1, 7) to (4, 6, 5). (Use the parameter t.)

$\mathbf{r}(t) =$

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6. 2.85/2.85 points | Previous Answers SCalcET7 12.5.027.

Find an equation of the plane.

The plane through the point (4, −2, −9) and parallel to the plane $2x - y - z = 3$

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7. 2.9/2.9 points | Previous Answers SCalcET7 12.5.031.

Find an equation of the plane.

The plane through the points (0, 7, 7), (7, 0, 7), and (7, 7, 0)

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