HW (due this Friday) 1.2: 25, 26, 29, 34, 36, 38; 1.3: 8, 10, 14, 17, 20, 25, 28; 1.4: 4, 10, 12, 13, 17, 19, 25; 1.5: 3, 8, 9, 15, 20

Find an equation of the line containing the point $\mathbf{p}$ and is parallel to the vector $\mathbf{a}$

Find an equation of the plane containing the point $\mathbf{p}$ and containing the vectors $\mathbf{a}$ and $\mathbf{b}$

Find the equation of the plane containing the points (1, 2, 3), (5, 4, 7), (0, 0, 6).

Normal form:

Find the equation of the plane containing the point $\mathbf{p}$ and orthogonal to the vector $\mathbf{n}$

Find the equation of the plane containing the points $(1, 2, 3)$, $(5, 4, 7)$, $(0, 0, 6)$.

$\mathbf{n} \cdot [(\mathbf{x} - \mathbf{p})] = 0$

$(n_1, n_2, n_3) \cdot [(x_1, x_2, x_3) - (p_1, p_2, p_3)] = 0$

$(n_1, n_2, n_3) \cdot (x_1 - p_1, x_2 - p_2, x_3 - p_3) = 0$

$n_1(x_1 - p_1) + n_2(x_2 - p_2) + n_3(x_3 - p_3) = 0$

$n_1x_1 + n_2x_2 + n_3x_3 = n_1p_1 + n_2p_2 + n_3p_3$

Equation of a plane in R^3 in normal form:

$$Ax + By + Cz = D$$

Equation of plane in other form $\mathbf{x} = s\mathbf{a} + t\mathbf{b} + \mathbf{p}$

Find the intersection of the planes $x - 2y + 5z = 0$ and $3x + 4y = 0$

Find the distance between the point (1, 2, 3) and the line $\mathbf{x} = t(4, 2, 5) + (0, 6, 2)$