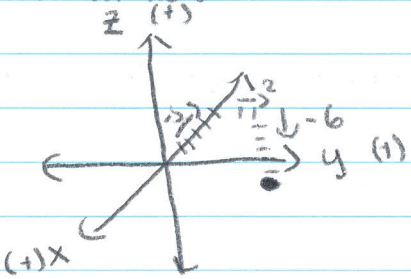
TB 3-6 3-D Systems

I. Graphing Points

A) Leave breadcrumbs!

ex/ $(-5, 2, -6)$
$x \quad y \quad z$



II. Solving

A) Use 3-D Template

x y (2)

① $3x - 2y + 4z = 7$
② $5x - 3y + z = 18$
③ $2x + y + 3z = 9$

① or ② $3x - 2y + 4z = 7 \longrightarrow 3x - 2y + 4z = 7$
② or ③ $+ 5x - 3y + z = 18 \ (4) \longrightarrow + -20y + 12y - 4z = -72$
④ $-17x + 10y = -65$

② used $5x - 3y + z = 18 \longrightarrow -15x + 9x - 3z = -54$
③ unused $+ 2x + y + 3z = 9 \longrightarrow + 2x + y + 3z = 9$
⑤ $-13x + 10y = -45$

④ $-17x + 10y = -65 \longrightarrow -17x + 10y = -65$
⑤ $-13x + 10y = -45 \longrightarrow + -13x + 10y = 45$
$-4x = 20$
$x = 5$

$3x - 2y + 4z = 7$
$3(5) - 2(2) + 4z = 7$
$15 - 4 + 4z = 7$
$11 + 4z = 7$
$4z = -4$
$z = -1$

$-13(5) + 10y = -45$
$-65 + 10y = -45$
$10y = 20$
$y = 2$

$(5, 2, -1)$