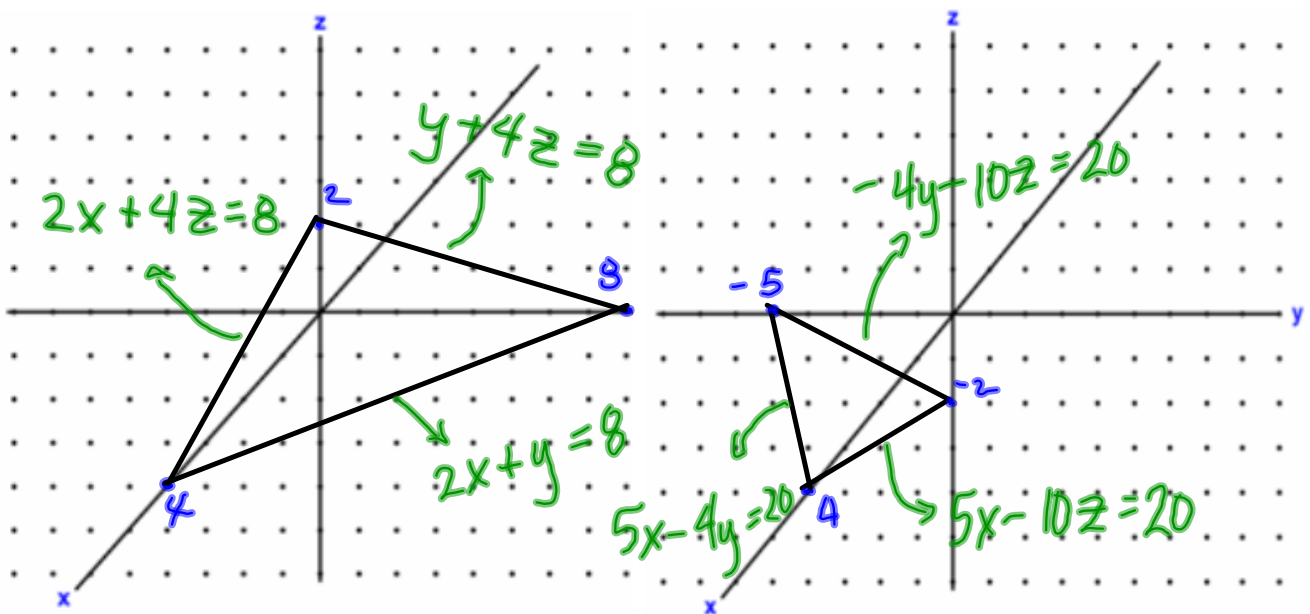


1. a.  $2x + y + 4z = 8$

b.  $5x - 4y - 10z = 20$

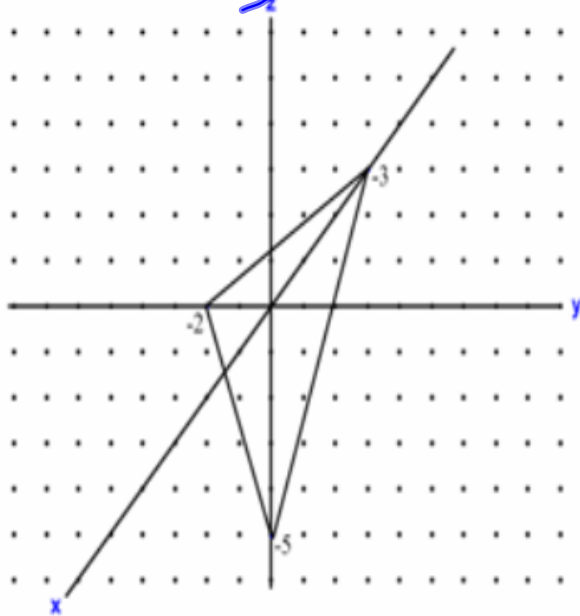
x-int = 4, y-int = 8, z-int = 2

x-int = 4, y-int = -5, z-int = -2

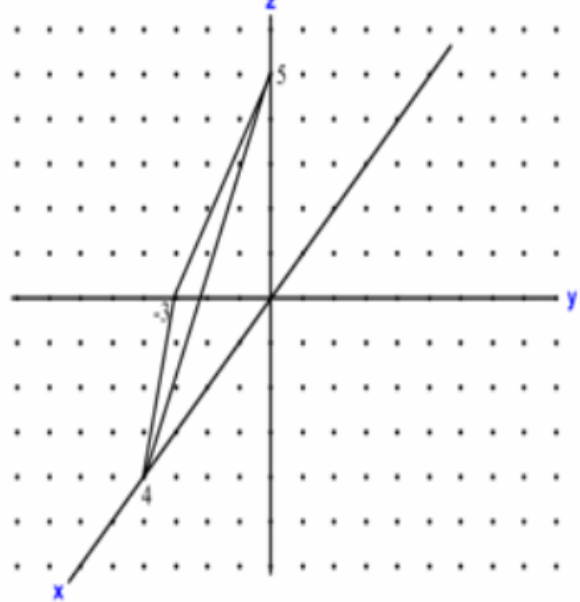


2. Determine the equations of the following planes.

a.  $-10x - 15y - 6z = 30$



b.  $15x - 20y + 12z = 60$



3. a. No solution
- b. Exactly one solution
- c. Infinitely many solutions

a)  $(5, -2, -6)$

d)  $(-3, -1, -4)$

b)  $(2, 4, 4)$

e) No solution

c) Infinitely many solutions

f)  $(0, -3, 1)$

**Solve each system by elimination.**

a)  $-3a + 3b - 6c = 15$

$$a - 3b - c = 17$$

$$2a + 3b - 2c = 16$$

b)  $-5y + 5z = 0$

$$5x + 4y - 3z = 14$$

$$-4x + 6y + 3z = 28$$

c)  $-r - s + 2t = 8$

$$-3r + 4s - 4t = -11$$

$$-6r + s + 2t = 13$$

d)  $-6r + 6s - 2t = 20$

$$-3r - 2s + 3t = -1$$

$$3r + s + 5t = -30$$

e)  $-3x - 2y + z = 6$

$$-5x - y + 4z = 5$$

$$-3x + y + 4z = 5$$

f)  $2x + 6y + 5z = -13$

$$4x - 5y + 2z = 17$$

$$5x - 5y - 5z = 10$$