$$2x + 4y + 2z = 16$$
$$-2x - 3y + z = -5$$
$$2x + 2y - 3z = -3$$

Hints :

- Can I use elimination, substitution, or both?
- Look at the x "column", can you "cancel" any variable out by elimination?
- After you cancel out x's, can you use substitution and isolate one variable?

Solution :

Step 1) $2x + 4y + 2z = 16$
$\underline{-2x - 3y + z = -5}$
$2(3) = 16$
$y + 3z = 11$
16

Step 2) $-2x - 3y + z = -5$
$\underline{2x + 2y - 3z = -3}$
$-y - 2z = -8$

Step 3) $y + 3z = 11$
$\underline{-y - 2z = -8}$
z = 3

Step 4) $y + 3z = 11$
$y + 3(3) = 11$

Step 5) $2x + 4y + 2z = 16$
$2x + 4(2) +$

$2x + 8 + 6 =$

$2x + 14 = 16$
$2x = 2$
x = 1

$y + 9 = 11$

$y = 2$