Add the two equations together.

    4. $3x + 2y = -1$

    5. $-8x - 2y = -4$

         $-5x\ \ = -5$

           $x = 1$

Now substitute x = 1 back into either equation 4. Or 5.

$3(1) + 2y = -1$

$3 + 2y = -1$

$2y = -4$

$Y = -2$

Now substitute back into one of the original equations both x = 1 and y = – 2 to solve for z.

    1. $X + y - z = -4$

        $(1) + (-2) - z = -4$

        $-1 - z = -4$

        $-z = -3$

        $z = 3$

Check this order triplet into the other two equations

    2. $2x + y + z = 3$ 3. $X - 2y + 3z = 14$

        $2(1) + (-2) + (3) = 3$ $(1) - 2(-2) + 3(3) = 14$

Therefore, (1, –2, 3) is the solution to the system of equations.