5 ejercicio

5.) $\sqrt{4x+1} - \sqrt{2x-3} = 8$

$\left(\sqrt{4x+1} - \sqrt{2x-3}\right)^2 = 8^2$

$(4x+1) - 2\sqrt{4x+1}\sqrt{2x-3} + (2x-3) = 64.$

$4x+1 - 2\sqrt{(4x+1)(2x-3)} + 2x - 3 = 64$

$6x - 2 - 2\sqrt{8x^2 - 10x - 3} = 64$

$2\left(x - 1 - \sqrt{8x^2 - 10x - 3}\right) = 64$

$x - 1 - \sqrt{8x^2 - 10x - 3} = \frac{64}{2}$

$x - 1 - \sqrt{8x^2 - 10x - 3} = 32.$

$x - 1 - 32 = \sqrt{8x^2 - 10x - 3}$

$x - 33 = \sqrt{8x^2 - 10x - 3}$

$(x-33)^2 = \left(\sqrt{8x^2 - 10x - 3}\right)^2$

$x^2 - 2(33)x + 33^2 = 8x^2 - 10x - 3.$

$x^2 - 66x + 1089 = 8x^2 - 10x - 3$

$1089 + 3 = 8x^2 - x^2 - 10x + 66x$

$1092 = 7x^2 + 56x$

$0 = \underset{a}{7}x^2 + \underset{b}{56}x - \underset{c}{1092}.$

$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

$x_1 = \frac{-56 + \sqrt{56^2 - 4(7)(1092)}}{2(7)}$

$x_2 = \frac{-56 - \sqrt{56^2 - 4(7)(1092)}}{2(7)}$

Recordando ÁÁ en (11)

~~14~~ - $x - 3z = 5$.

6 $\frac{130}{23} - 3z = 5$

$\frac{130}{23} - 5 = 3z$

$\frac{130}{23} - \frac{115}{23} = 3z$

$\frac{130-115}{23} = 3z$

$\frac{15}{23} = 3z$

$\frac{15}{3 \times 23} = z$

$\boxed{\frac{5}{23} = z}$

5 $x + 2y = 14$

$x = \frac{130}{23}$

$\frac{130}{23} + 2y = 14$

$2y = 14 - \frac{130}{23}$

$2y = \frac{322}{23} - \frac{130}{23}$

$2y = \frac{322-130}{23} = \frac{192}{23}$

$y = \frac{192}{2 \times 23} = \frac{96}{23}$

$\boxed{y = \frac{96}{23}}$ ÁÁÁ

~~14~~ 5

~~69~~

Luego

7

(1) es $x + 2y = 14$

con $x = \frac{130}{23}$ $y = \frac{96}{23}$

$\frac{130}{23} + 2\left(\frac{96}{23}\right) = 14$

$\frac{130}{23} + \frac{192}{23} = 14$

$\frac{322}{23} = 4$

$14 = 14$ ✓

Se verifica con x, y y z.

8

Luego con $x - 3z = 5$.

$\left(\frac{130}{23}\right) - 3\left(\frac{5}{23}\right) = 5$

$\frac{130}{23} - \frac{15}{23} = 5$

$\frac{130-15}{23} = 5$

$\frac{115}{23} = 5$

$5 = 5$. ✓

ejercicio n° 3

3. (i) $x+2y=14$, (ii) $x-3z=5$, (iii) $2x-3y+2z=-1$.

(-1) x =3.

$2x-3y+z=-1$

$(-2)\quad x\quad -3z=5$

$2x-3y+z=-1$

$+\quad -2x\quad +6z=-10$

$0-3y+7z=-11$

$-3y+7z=-11$ **

2

$x-3z=5$

$x-5=3z$

$x=3z+5$ *

Reemplazando * en (i)

$x+2y=14$ (i)

$(3z+5)+2y=14$

$3z+2y=14-5$

$3z+2y=9$ ***

$3z=9-2y$

$z=\frac{9-2y}{3}$ ***

1

usemos ** y ***

$-3y+7z=-11$

$2y+3z=9$

3

$\times 2$ → $-6y+14z=-22$

$\times 3$ → $6y+9z=27$

suma $0+23z=5$

$z=\frac{5}{23}$ Δ

4

Reemplazando Δ en (ii)

$x-3z=5$

$x-3\left(\frac{5}{23}\right)=5$

$x-\frac{15}{23}=5$

$x=5+\frac{15}{23}$

$x=\frac{115+15}{23}$

$x=\frac{130}{23}$ ΔΔ

... comprueba.

$$c = \frac{67}{27}$$

$$7\left(\frac{67}{27}\right) - 15 = -2\left[6(c-3) - 4(2-c)\right]$$

$$7\left(\frac{67}{27}\right) - 15 = -2\left[6\left(\frac{67}{27} - 3\right) - 4\left(2 - \frac{67}{27}\right)\right]$$

$$\frac{256}{27} - \frac{405}{27} = -2\left[6\left(\frac{67}{27} - \frac{81}{27}\right) - 4\left(\frac{54}{27} - \frac{67}{27}\right)\right]$$

$$\frac{256 - 405}{27} = -2\left[6\left(\frac{67-81}{27}\right) - 4\left(\frac{54-67}{27}\right)\right]$$

$$-\frac{149}{27} = -2\left[6\left(\frac{-14}{27}\right) - 4\left(\frac{-13}{27}\right)\right]$$

$$-\frac{149}{27} = -2\left[-\frac{84}{27} + \frac{52}{27}\right]$$

$$-\frac{149}{27} = -2\left[\frac{-32}{27}\right]$$

$$-\frac{149}{27} = \frac{64}{27}$$ ✗ el dijo que quedo mal.

(2) ejercicio 2.

$$7c-15 = -2[6(c-3) - 4(2-c)]$$

$$7c-15 = -2[6c - 18 - 8 + 4c]$$

$$7c-15 = -2[10c - 26]$$

$$7c-15 = -20c + 52 \rightarrow 7c + 20c = 52 + 15$$

$$27c = 67$$

$$c = \frac{67}{27}$$

$$c = \frac{-67}{-27}$$

$$c = \frac{67}{27}$$

continua. comprueba

$$7\left(\frac{37}{13}\right) - 15 = 2\left[6\left(\frac{37}{13} - 3\right) - 4\left(2 - \frac{37}{13}\right)\right]$$

$$\frac{128}{13} - 15 = 12\left(\frac{37}{13} - 3\right) - 8\left(2 - \frac{37}{13}\right)$$

$$\frac{128}{13} - \frac{195}{13} = 12\left(\frac{37}{13} - \frac{39}{13}\right) - 8\left(\frac{26}{13} - \frac{37}{13}\right)$$

$$\frac{128-195}{13} = 12\left(\frac{37-39}{13}\right) - 8\left(\frac{26-37}{13}\right)$$

$$\frac{-67}{13} = 12\left(\frac{-2}{13}\right) - 8\left(\frac{-11}{13}\right)$$

$$\frac{-67}{13} = \frac{-24}{13} + \frac{88}{13}$$

$$\frac{-67}{13} = \frac{88-24}{13}$$

$$-\frac{67}{13} = \frac{62}{13}$$

1. Portada (nombre de la institución, nombre del curso, título del trabajo, nombre del docente, nombre e identificación de los estudiantes, lugar y fecha de elaboración)
2. Introducción
3. Desarrollo de la actividad
4. Conclusiones
5. Referencias (Norma APA versión 3 en español (traducción de la versión 6 en inglés))

VI. Bibliografía recomendada:

(1)

$$\frac{(x+3)(2x^2+22x+56)}{x^2+7x+12} + \frac{x^3+216}{x^2-6x+36} + \frac{x^3+3x^2-10x}{x^2+5x} - \frac{x^2+6x-7}{x+7} = 0$$

(*) (**) (***) (****)

(*) $x^2+7x+12 = (x+4)(x+3)$

(**) $x^3+3x^2-10x = x(x^2+3x-10)$
$= x(x+5)(x-2)$

(***) $x^2+5x = x(x+5)$

(****) $x^2+6x-7 = (x+7)(x-1)$

△ $2x^2+22x+56 = 2(x^2+11x+28)$
$= 2(x+7)(x+4)$

△△ ~~$x^2-6x+36 = (x-6)(x-6)$~~

△△
$x^3+216 = (x+6)(x^2-6x+36)$

$$\frac{(x+3)(2x^2+22x+56)}{(x+4)(x+3)} + \frac{x^3+216}{x^2-6x+36} + \frac{x(x+5)(x-2)}{x(x+5)} - \frac{(x+7)(x-1)}{(x+7)} = 0$$

△ △△
$$\frac{2x^2+22x+56}{x+4} + \frac{x^3+216}{x^2-6x+36} + (x-2) - (x-1) = 0$$

△
$$\frac{2(x+7)(x+4)}{(x+4)} + \frac{(6+x)(x^2-6x+36)}{(x^2-6x+36)} + (x-2) - (x-1) = 0$$

$$2(x+7) + (x+6) + (x-2) - (x-1) = 0$$

$$2x+14+x+6+x-2-x+1 = 0$$

$$3x+19 = 0$$

$$3x = -19$$

$$\boxed{x = -\frac{19}{3}}$$