N: Northerly steps

E: Eeasterly steps

$$3(N+E) = 4 + 4N$$

$$5(N-2) = 2 + 7E$$

Podemos construir expresiones multivariable más complejas:

A) $\sqrt{x^2 + y^2}$

B) $2a^2b + 3b^2c + 6ac^2$

C) $\dfrac{r^2 + s^2}{2rs}$

Cuando tenemos un producto de más de una variable, usualmente ponemos las variables en orden alfabético.

## Problems.

4.1)

(a) $r + s = 3 - 2 = 1$

(b) $2rs = 2(3)(-2) = -12$

(c) $r^2 + s^2 = 9 + 4 = 13$

(d) $\dfrac{r^2 - 3r}{4s} = \dfrac{9 - 9}{-8} = 0$

(e)

$$\sqrt{7r - 2r^2 s} = \sqrt{7(3) - 2(9)(-2)}$$

$$= \sqrt{21 + 36} = \sqrt{57}$$

(5)  $\left(3 - (-2)\right)^2 + \left(3 + (-2)\right)^2$

$$5^2 + 1 = 26$$

<span style="color:red">Exercises</span>

<span style="color:red">4.1.1)</span>  $x = -2$, $y = 6$

(a)  $6 - 2(-2) = 6 + 4 = 10$

(b)  $3xy = 3(-2)(6) = -36$

(c)

$$2x^2 y + xy^2 = 2(-2)^2 (6) + (-2) \cdot (6)^2$$

$$= 8(6) - 72$$

$$= 48 - 72 = -24$$

(d)

$$\frac{x^2}{y+6} = \frac{4}{12} = \frac{1}{3}$$

(e)  $x^y = (-2)^6 = 2^6 = 64$

(F)  $(2x - y)(2x + y) = (2(-2) - 6)(2(-2) + 6)$

$$= (-4 - 6)(-4 + 6)$$

$$= -10(2) = \boxed{-20}$$

4.1.2)

(a) $ab + bc + ca$

$$\left(\tfrac{3}{2}\right)(-1) + (-1)(6) + \left(\tfrac{3}{6}\right)\left(\tfrac{3}{2}\right)$$

$$-\tfrac{3}{2} - 6 + 9 = -\tfrac{3}{2} + \tfrac{6}{2}$$

$$= \boxed{\tfrac{3}{2}}$$

(b) $ab^2c = \tfrac{3}{2}(-1)^2(6)$

$$= \boxed{9}$$

(c) $\dfrac{(2a+b)(c-2)}{abc}$

$$\dfrac{\left(2\left(\tfrac{3}{2}\right) + (-1)\right)(4)}{-9}$$

$$= \boxed{-\tfrac{8}{9}}$$

(d) $cab = 6\left(\tfrac{3}{2}\right)^{-1}$

$$= 6\left(\tfrac{2}{3}\right) = \boxed{4}$$