Repetition - multiplication or multiply

Regler: $a(b+c) = ab+ac \qquad -a(b+c)$

$(a+b)(c+d) = ac+ad+bc+bd$

Ex) Forenkla uttrycken

a) $2x(x+4) = 2x^2+8x$

b) $-3x(y-x) = -3xy+3x^2$

c) $(1+x)(x+3) = x+3+x^2+3x = x^2+4x+3$

d) $(2x+1)(3x+2) = 6x^2+4x+3x+2 = 6x^2+7x+2$

e) $\left(\frac{x}{2}+\frac{1}{3}\right)\left(\frac{x}{3}+\frac{1}{3}\right) = \frac{x}{2}\cdot\frac{x}{3}+\frac{x}{2}\cdot\frac{1}{3}+\frac{1}{3}\cdot\frac{x}{3}+\frac{1}{3}\cdot\frac{1}{3} = \frac{x^2}{6}+\frac{x}{6}+\frac{x}{9}+\frac{1}{9}$

$= \frac{x^2}{6}+\frac{3x}{18}+\frac{2x}{18}+\frac{1}{9} = \frac{x^2}{6}+\frac{5x}{18}+\frac{1}{9}$

f) $(2y-3x)(4x-3y) = 8xy-6y^2-12x^2+9xy = 17xy-6y^2-12x^2$