Use FOIL to multiply two binomials.

FIRST: $(2x)(6x) = 12x^2$

OUTER: $(2x)(-2y) = -4xy$ INNER: $(-3y)(6x) = -18xy$

LAST: $(-3y)(-2y) = 6y^2$

Combine like terms: $12x^2 - 4xy - 18xy + 6y^2 = 12x^2 - 22xy + 6y^2$