

Multiplying Binomials

The Distributive Property

To multiply a monomial by a polynomial, you multiply the monomial by each term of the polynomial.

a) $3(x^2 + 5x - 4)$

b) $-2x(2x^2 - 8x + 7)$

To multiply a binomial by a polynomial, you multiply each term of the binomial by each term of the polynomial.

a) $(4x - 3)(2x)$

b) $(x - 3)(x + 6)$

There is an acronym to help you remember how to multiply binomials.

F – first terms

O – outside terms

I – inside terms

L – last terms

$(x + 5)(x - 10)$

1. Examples – Expand and Simplify

a) $(2x - 3)(x - 2)$

c) $(9x + 8)(9x - 8)$

d) $(5x - 3y)(5x + 3y)$

e) $(5a - b)^2$

f) $(x + 2y)^2$

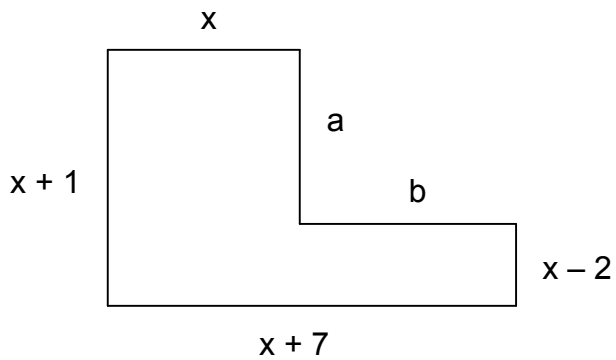
2. A rectangular building with sides of x metres and $2x$ metres is extended by 3 metres on each side.

a) Illustrate this situation in a diagram.

b) Express the new area as a product of two binomials.

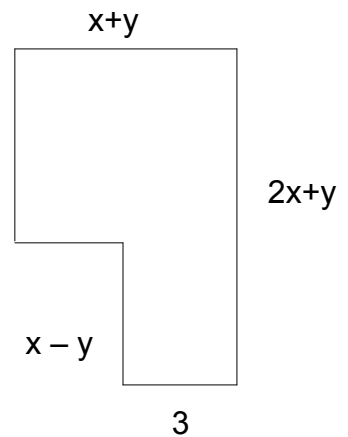
c) Evaluate the area if $x = 15$ m.

3. Write and simplify an expression to represent the area of the shape below.



Homework → Complete the question below + p. 217 # 3ace, 4ace, 5ace, 6ace.

1. a) Write and simplify an expression to represent the area of the shape below.



1. b) Find the area of this shape if $x = 5$ m and $y = 6$ m.