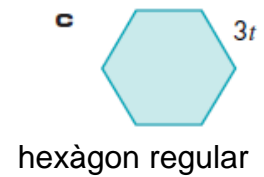
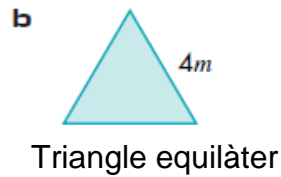
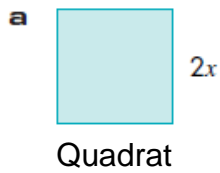
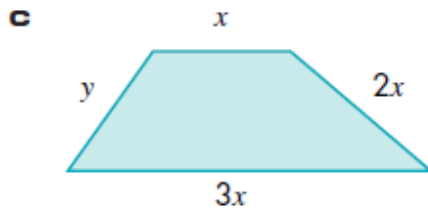
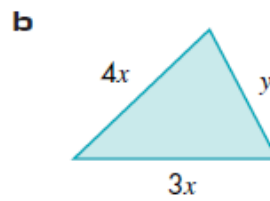
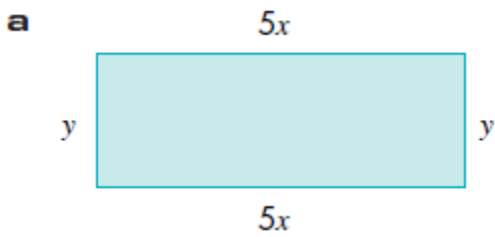


Àlgebra bàsica

1.- Calculeu el perímetre de les següents figures:



2.- Calculeu el perímetre de les següents figures:



3.- Simplifiqueu les següents expressions

a $a + a + a + a + a$

b $c + c + c + c + c + c$

c $4e + 5e$

d $f + 2f + 3f$

e $g + g + g + g - g$

f $3i + 2i - i$

g $5j + j - 2j$

h $9q - 3q - 3q$

i $3r - 3r$

j $2w + 4w - 7w$

k $5x^2 + 6x^2 - 7x^2 + 2x^2$

l $8y^2 + 5y^2 - 7y^2 - y^2$

4.- Simplifiqueu les següents expressions

a $3x + 4x$

b $4y + 2y$

c $5t - 2t$

d $t - 4t$

e $-2x - 3x$

f $-k - 4k$

g $m^2 + 2m^2 - m^2$

h $2y^2 + 3y^2 - 5y^2$

i $-f^2 + 4f^2 - 2f^2$

5.- Simplifiqueu les següents expressions

a $5x + 8 + 2x - 3$

b $7 - 2x - 1 + 7x$

c $4p + 2t + p - 2t$

d $8 + x + 4x - 2$

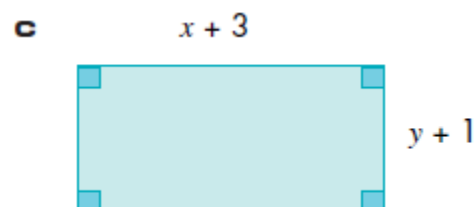
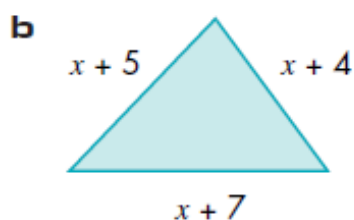
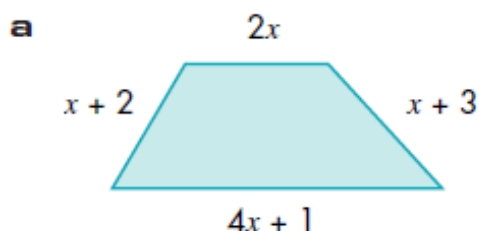
e $3 + 2t + p - t + 2 + 4p$

f $5w - 2k - 2w - 3k + 5w$

g $a + b + c + d - a - b - d$

h $9k - y - 5y - k + 10$

6.- Calculeu el perímetre de les següents figures:



7.- Expandiu i simplifiqueu les expressions:

a $3(x + 1)$

b $2(5 - x)$

c $-(x + 2)$

d $-(3 - x)$

e $4(a + 2b)$

f $3(2x + y)$

g $5(x - y)$

h $6(-x^2 + y^2)$

i $-2(x + 4)$

j $-3(2x - 1)$

k $x(x + 3)$

l $2x(x - 5)$

m $-3(x + 2)$

n $-4(x - 3)$

o $-(7 - 2x)$

p $-2(x - y)$

q $a(a + b)$

r $-a(a - b)$

s $x(2x - 1)$

t $2x(x^2 - x - 2)$

8.- Expandiu i simplifiqueu les expressions:

a $1 + 2(x + 2)$

b $13 - 4(x + 3)$

c $3(x - 2) + 5$

d $4(3 - x) - 10$

e $x(x - 1) + x$

f $2x(3 - x) + x^2$

g $2a(b - a) + 3a^2$

h $4x - 3x(x - 1)$

i $7x^2 - 5x(x + 2)$

9.- Expandiu i simplifiqueu les expressions:

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

b $2a + (a - 2b)$

c $2a - (a - 2b)$

d $3(y + 1) + 6(2 - y)$

e $2(y - 3) - 4(2y + 1)$

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

g $2(b - a) + 3(a + b)$

h $x(x + 4) + 2(x - 3)$

i $x(x + 4) - 2(x - 3)$

j $x^2 + x(x - 1)$

k $-x^2 - x(x - 2)$

l $x(x + y) - y(x + y)$

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

n $5(2x - 1) - (2x + 3)$

o $4x(x - 3) - 2x(5 - x)$

10.- Expandiu i simplifiqueu les expressions:

a $(x + 3)(x + 7)$	b $(x + 5)(x - 4)$	c $(x - 3)(x + 6)$	d $(x + 2)(x - 2)$
e $(x - 8)(x + 3)$	f $(2x + 1)(3x + 4)$	g $(1 - 2x)(4x + 1)$	h $(4 - x)(2x + 3)$
i $(3x - 2)(1 + 2x)$	j $(5 - 3x)(5 + x)$	k $(7 - x)(4x + 1)$	l $(5x + 2)(5x + 2)$

11.- Expandiu i simplifiqueu les expressions:

a $(x + 2)(x - 2)$	b $(a - 5)(a + 5)$	c $(4 + x)(4 - x)$
d $(2x + 1)(2x - 1)$	e $(5a + 3)(5a - 3)$	f $(4 + 3a)(4 - 3a)$

12.- Expandiu i simplifiqueu les expressions:

a $(x + 2)(x - 2)$	b $(x - 2)(x + 2)$	c $(2 + x)(2 - x)$
d $(2 - x)(2 + x)$	e $(x + 1)(x - 1)$	f $(1 - x)(1 + x)$
g $(x + 7)(x - 7)$	h $(c + 8)(c - 8)$	i $(d - 5)(d + 5)$
j $(x + y)(x - y)$	k $(4 + d)(4 - d)$	l $(5 + e)(5 - e)$

13.- Expandiu i simplifiqueu les expressions:

a $(x + 5)^2$	b $(x + 4)^2$	c $(x + 7)^2$
d $(a + 2)^2$	e $(3 + c)^2$	f $(5 + x)^2$

14.- Expandiu i simplifiqueu les expressions:

a $(x - 3)^2$	b $(x - 2)^2$	c $(y - 8)^2$
d $(a - 7)^2$	e $(5 - x)^2$	f $(4 - y)^2$

15.- Expandiu i simplifiqueu les expressions:

a $(3x + 4)^2$	b $(2a - 3)^2$	c $(3y + 1)^2$
d $(2x - 5)^2$	e $(3y - 5)^2$	f $(7 + 2a)^2$
g $(1 + 5x)^2$	h $(7 - 3y)^2$	i $(3 + 4a)^2$

16.- Expandiu i simplifiqueu les expressions:

a $(x^2 + 2)^2$	b $(y^2 - 3)^2$	c $(3a^2 + 4)^2$
d $(1 - 2x^2)^2$	e $(x^2 + y^2)^2$	f $(x^2 - a^2)^2$

17.- Expandiu i simplifiqueu les expressions:

a $3x + 1 - (x + 3)^2$

c $(x + 2)(x - 2) + (x + 3)^2$

e $(3 - 2x)^2 - (x - 1)(x + 2)$

g $(2x + 3)(2x - 3) - (x + 1)^2$

i $(1 - x)^2 + (x + 2)^2$

b $5x - 2 + (x - 2)^2$

d $(x + 2)(x - 2) - (x + 3)^2$

f $(1 - 3x)^2 + (x + 2)(x - 3)$

h $(4x + 3)(x - 2) - (2 - x)^2$

j $(1 - x)^2 - (x + 2)^2$

18.- Completeu:

a $2x + 4 = 2(x + \dots)$

c $15 - 5p = 5(\dots - p)$

e $4x^2 - 8x = 4x(x - \dots)$

b $3a - 12 = 3(a - \dots)$

d $18x + 12 = 6(\dots + 2)$

f $2m + 8m^2 = 2m(\dots + 4m)$

19.- Completeu:

a $4x + 16 = 4(\dots + \dots)$

c $5c - 5 = 5(\dots - \dots)$

e $6a + 8ab = \dots(3 + 4b)$

g $7ab - 7a = \dots(b - 1)$

b $10 + 5d = 5(\dots + \dots)$

d $cd + de = d(\dots + \dots)$

f $6x - 2x^2 = \dots(3 - x)$

h $4ab - 6bc = \dots(2a - 3c)$

20.- Factoritzeu les expressions:

a $3a + 3b$

e $7x - 14$

i $5a + ab$

m $a + ab$

b $8x - 16$

f $12 + 6x$

j $bc - 6cd$

n $xy - yz$

c $3p + 18$

g $ac + bc$

k $7x - xy$

o $3pq + pr$

d $28 - 14x$

h $12y - 6a$

l $xy + y$

p $cd - c$

21.- Factoritzeu les expressions:

a $x^2 + 2x$

e $6x^2 + 12x$

i $9x^3 - 18xy$

b $5x - 2x^2$

f $x^3 + 9x^2$

j $a^3 + a^2 + a$

c $4x^2 + 8x$

g $x^2y + xy^2$

k $2a^2 + 4a + 8$

d $14x - 7x^2$

h $4x^3 - 6x^2$

l $3a^3 - 6a^2 + 9a$

22.- Factoritzeu les expressions:

a $-9a + 9b$

e $-a + ab$

i $-a + a^2$

b $-3 + 6b$

f $-6x^2 + 12x$

c $-8a + 4b$

g $-5x + 15x^2$

d $-7c + cd$

h $-2b^2 + 4ab$

22.- Factoritzeu les expressions:

a $-6a - 6b$

b $-4 - 8x$

c $-3y - 6z$

d $-9c - cd$

e $-x - xy$

f $-5x^2 - 20x$

g $-12y - 3y^2$

h $-18a^2 - 9ab$

i $-16x^2 - 24x$

23.- Factoritzeu les expressions:

a $2(x - 7) + x(x - 7)$

b $a(x + 3) + b(x + 3)$

c $4(x + 2) - x(x + 2)$

d $x(x + 9) + (x + 9)$

e $a(b + 4) - (b + 4)$

f $a(b + c) + d(b + c)$

g $a(m + n) - b(m + n)$

h $x(x + 3) - x - 3$

24.- Factoritzeu les expressions:

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

b $5(x - 7) + (x - 7)(x + 2)$

c $(x + 6)(x + 4) - 8(x + 6)$

d $(x - 2)^2 - 6(x - 2)$

e $(x + 2)^2 - (x + 2)(x + 1)$

f $5(a + b) - (a + b)(a + 1)$

g $3(a - 2)^2 - 6(a - 2)$

h $(x + 4)^2 + 3(x + 4)(x - 1)$

i $x(x - 1) - 6(x - 1)(x - 5)$

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

25.- Factoritzeu les expressions:

a $x^2 - 4$

b $4 - x^2$

c $x^2 - 81$

d $25 - x^2$

e $4x^2 - 1$

f $9x^2 - 16$

g $4x^2 - 9$

h $36 - 49x^2$

26.- Factoritzeu les expressions:

a $3x^2 - 27$

b $-2x^2 + 8$

c $3x^2 - 75$

d $-5x^2 + 5$

e $8x^2 - 18$

f $-27x^2 + 75$

27.- Expandiu i simplifiqueu les expressions:

a $3(4 + t) + 2(5 + t)$

b $5(3 + 2k) + 3(2 + 3k)$

c $4(1 + 3m) + 2(3 + 2m)$

d $2(5 + 4y) + 3(2 + 3y)$

e $4(3 + 2f) + 2(5 - 3f)$

f $5(1 + 3g) + 3(3 - 4g)$

g $3(2 + 5t) + 4(1 - t)$

h $4(3 + 3w) + 2(5 - 4w)$

28.- Expandiu i simplifiqueu les expressions:

a $4(3 + 2h) - 2(5 + 3h)$

b $5(3g + 4) - 3(2g + 5)$

c $3(4y + 5) - 2(3y + 2)$

d $3(5t + 2) - 2(4t + 5)$

e $5(5k + 2) - 2(4k - 3)$

f $4(4e + 3) - 2(5e - 4)$

g $3(5m - 2) - 2(4m - 5)$

h $2(6t - 1) - 3(3t - 4)$

29.- Expandiu i simplifiqueu les expressions:

a $m(4 + p) + p(3 + m)$

b $k(3 + 2h) + h(4 + 3k)$

c $t(2 + 3n) + n(3 + 4t)$

d $p(2q + 3) + q(4p + 7)$

e $3h(2 + 3j) + 2j(2h + 3)$

f $2y(3t + 4) + 3t(2 + 5y)$

g $4r(3 + 4p) + 3p(8 - r)$

h $5k(3m + 4) - 2m(3 - 2k)$

30.- Expandiu i simplifiqueu les expressions:

a $t(3t + 4) + 3t(3 + 2t)$

b $2y(3 + 4y) + y(5y - 1)$

c $4w(2w + 3) + 3w(2 - w)$

d $5p(3p + 4) - 2p(3 - 4p)$

e $3m(2m - 1) + 2m(5 - m)$

f $6d(4 - 2d) + d(3d - 2)$

g $4e(3e - 5) - 2e(e - 7)$

h $3k(2k + p) - 2k(3p - 4k)$

31.- Expandiu i simplifiqueu les expressions:

a $4a(2b + 3c) + 3b(3a + 2c)$

b $3y(4w + 2t) + 2w(3y - 4t)$

c $2g(3h - k) + 5h(2g - 2k)$

d $3h(2t - p) + 4t(h - 3p)$

e $a(3b - 2c) - 2b(a - 3c)$

f $4p(3q - 2w) - 2w(p - q)$

g $5m(2n - 3p) - 2n(3p - 2m)$

h $2r(3r + r^2) - 3r^2(4 - 2r)$