

The Distributive Property

Level 1 - Multiply a binomial by a monomial

Level 2 - Multiply using trinomials and fractions

Level 3 - Multiply polynomials using fractions and fractional exponents

scan for answers



Chapter 2: Worksheet 1

Level 1

Expand the following expressions by using the distributive property.

a) $3(n + 2)$	b) $4(x + 3)$	c) $6(m - 2)$
d) $-2(x + 4)$	e) $4(2x + 5)$	f) $6(3x - 5)$
g) $5(2x - 3)$	h) $3(2 - 3x)$	i) $8(2x + 11)$
j) $x(x + 4)$	k) $x(3x - 4)$	l) $-n(2 - n)$
m) $3y(y - 2)$	n) $5k(2 - 2k)$	o) $-2x(-x + 2)$
p) $2(n + 3) + 3(n + 2)$	q) $3(x - 2) + 2(x - 4)$	r) $-5(x + 1) + 2(x - 6)$
s) $4(y + 2) - 3(y + 5)$	t) $2(m + 3) - 4(m - 2)$	u) $-4(x - 2) - 3(x - 3)$

Level 2

Expand the following expressions by using the distributive property.

a) $2(x^2 + x + 1)$	b) $4(n^3 + n^2 + n)$	c) $x(x^3 + x^2 - 1)$
d) $\frac{1}{2}\left(x + \frac{1}{2}\right)$	e) $\frac{2}{3}\left(n - \frac{3}{2}\right)$	f) $\frac{1}{4}\left(2x + \frac{1}{3}\right)$
g) $a^2(2 - a)$	h) $-n(-n^2 - n - 2)$	i) $y^3(y^3 + y^2 + y)$
j) $x(x - y)$	k) $h(h + k - g)$	l) $x(xy - x + y)$
m) $x\left(x + \frac{1}{x}\right)$	n) $y\left(y^2 - \frac{x}{y}\right)$	o) $\frac{1}{x}\left(x + \frac{x}{2} - x^2\right)$

Level 3

Expand the following expressions by using the distributive property.

a) $\frac{x}{4}\left(x + \frac{1}{3}\right)$

b) $\frac{2}{3}a\left(\frac{1}{2}a^2 + \frac{1}{2}a - \frac{1}{2}\right)$

c) $m^{\frac{1}{2}}\left(m^{\frac{3}{2}} + m^{\frac{5}{2}}\right)$

d) $x^{\frac{1}{2}}\left(4x^{\frac{3}{2}} - 2x^{\frac{1}{2}}\right)$

e) $\frac{2}{3}x^{\frac{1}{2}}\left(3x^{\frac{3}{2}} - \frac{3}{2}x^{\frac{-1}{2}}\right)$

f) $\frac{x}{y}\left(xy + \frac{y}{x}\right)$

g) $x^{\frac{3}{2}}\left(x^{\frac{3}{2}} - x^{\frac{1}{2}}\right) + x(x^2 + 1)$

h) $a^{-\frac{1}{2}}\left(a + a^{\frac{1}{2}}\right)$

i) $ab\left(\frac{a}{b^2} + a^{-1}b\right)$