Expand linear and quadratic expression

Maths

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Expand linear and quadratic expression

1. Expand these expressions.

a) $x^2(x+5)$

b) $x^2(10-x)$

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

d) $\frac{1}{3}x^2(6x-9)$

e) $\frac{2}{5}x^2(30-5x)$

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

g) $3x^2(x+4y)$

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

2. Use the grid to expand $(x^2+2)(x+5)$

	x^2	2
x		
5		

3. Expand these expressions.

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

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

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

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

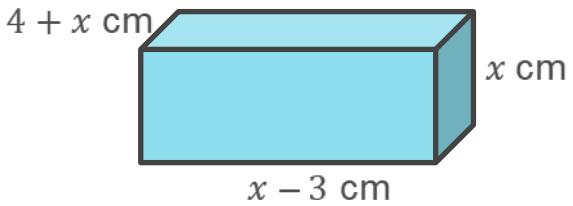
e) $(2x^2+2)(x+5)$

f) $(2x^2+4)(x-5)$

g) $(5x-3x^2)(x+6)$

h) $(2x^2+3x)(7-x)$

4. Find the volume of this shape.



Answers

Expand linear and quadratic expression

1. Expand these expressions.

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

b) $x^2(10-x)$ $10x^2-x^3$

c) $3x^2(2x+4)$ $6x^3+12x^2$

d) $\frac{1}{3}x^2(6x-9)$ $2x^3-3x^2$

e) $\frac{2}{5}x^2(30-5x)$ $12x^2-2x^3$

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

g) $3x^2(x+4y)$ $3x^3+12x^2y$

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

2. Use the grid to expand $(x^2+2)(x+5)$

	x^2	2
x	x^3	$2x$
5	$5x^2$	10

$x^3+5x^2+2x+10$

3. Expand these expressions.

a) $(x^2+3)(x+3)$ x^3+3x^2+3x+9

b) $(x^2+3)(x-3)$ x^3-3x^2+3x-9

c) $(x^2-3)(x-3)$ x^3-3x^2-3x+9

d) $(3-x^2)(x-3)$ $-x^3+3x^2+3x-9$

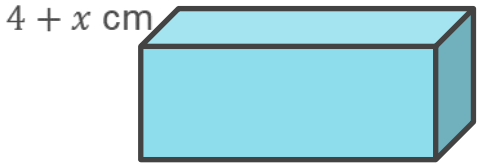
e) $(2x^2+2)(x+5)$ $2x^3+10x^2+2x+10$

f) $(2x^2+4)(x-5)$ $2x^3-10x^2+4x-20$

g) $(5x-3x^2)(x+6)$ $-3x^3-13x^2+30x$

h) $(2x^2+3x)(7-x)$ $-2x^3+11x^2+21x$

4. Find the volume of this shape.



x^3+x^2-12x