

Decode the Joke

Factorising with Common Factors

Factorise fully the expression for each of the letters of the alphabet.

A	$4x + 12y$	$4(x + 3y)$
B	$4x + xy$	$x(4 + y)$
C	$4x - 3xy$	$x(4 - 3y)$
D	$4x - 12xy$	$4x(1 - 3y)$
E	$x^2 + 3xy$	$x(x + 3y)$
F	$4x^2 + 4xy$	$4x(x + y)$
G	$4xy - 12$	$4(xy - 3)$
H	$3xy - 12y^2$	$3y(x - 4y)$
I	$4x^2 + 12xy$	$4x(x + 3y)$
J	$12x^2 + 4y$	$4(3x^2 + y)$
K	$12x^2 - 2xy$	$2x(6x - y)$
L	$12xy - x^2y$	$xy(12 - x)$
M	$12x - 18xy^2$	$6x(2 - 3y^2)$

N	$6xy + 8y$	$2y(3x + 4)$
O	$6x + 9xy$	$3x(2 + 3y)$
P	$6xy - 3x^2$	$3x(2y - x)$
Q	$8xy - 12x^2y$	$4xy(2 - 3x)$
R	$6x^2 + 8x^2y$	$2x^2(3 + 4y)$
S	$6x^2y + 8xy$	$2xy(3x + 4)$
T	$12xy^2 - 6y^2$	$6y^2(2x - 1)$
U	$12x^2y - 9xy$	$3xy(4x - 3)$
V	$8x^2y + 3x^2y^2$	$x^2y(8 + 3y)$
W	$12x^3y + 18x^2y$	$6x^2y(2x + 3)$
X	$12x^3 - 8x^2y^2$	$4x^2(3x - 2y^2)$
Y	$12xy - 12x^3y$	$12xy(1 - x^2)$
Z	$6x^3y^2 - 12xy^3$	$6xy^2(x^2 - 2y)$

Now decode the joke....

$6x^2y(2x + 3)$	$3y(x - 4y)$	$3x(2 + 3y)$		$4x(x + 3y)$	$2y(3x + 4)$	$x^2y(8 + 3y)$	$x(x + 3y)$
W	H	O		I	N	V	E

$2y(3x + 4)$	$6y^2(2x - 1)$	$x(x + 3y)$	$4x(1 - 3y)$		$4(x + 3y)$	$xy(12 - x)$	$4(xy - 3)$
N	T	E	D		A	L	G

$x(x + 3y)$	$x(4 + y)$	$2x^2(3 + 4y)$	$4(x + 3y)$	?	$4(x + 3y)$	$2y(3x + 4)$
E	B	R	A	?	A	N

	$4x^2(3x - 2y^2)$	-	$3x(2y - x)$	$x(x + 3y)$	$2x^2(3 + 4y)$	$6y^2(2x - 1)$	!
	X	-	P	E	R	T	!