

1 Complète la table de multiplication pour développer les expressions.

$$A = (u + 5)(4 + u)$$

$$A = 4u + u^2 + 20 + 5u$$

$$A = u^2 + 9u + 20$$

×	u	$+ 5$
4	$4u$	20
$+ u$	u^2	$5u$

$$B = (v - 4)(2v - 3)$$

$$B = 2v^2 - 8v - 3v + 12$$

$$B = 2v^2 - 11v + 12$$

×	v	$- 4$
$2v$	$2v^2$	$- 8v$
$- 3$	$- 3v$	12

2 Développe puis réduis chaque expression.

$$C = (2x + 5)(3x + 7)$$

$$C = 2x \times 3x + 2x \times 7 + 5 \times 3x + 5 \times 7$$

$$C = 6x^2 + 14x + 15x + 35$$

$$C = 6x^2 + 29x + 35$$

$$D = (x + 1)(x + 5)$$

$$D = x \times x + x \times 5 + 1 \times x + 1 \times 5$$

$$D = x^2 + 5x + x + 5 = x^2 + 6x + 5$$

$$E = (4x + 5)(2x + 6)$$

$$E = 4x \times 2x + 4x \times 6 + 5 \times 2x + 5 \times 6$$

$$E = 8x^2 + 24x + 10x + 30$$

$$E = 8x^2 + 34x + 30$$

$$F = (2 + x)(5x + 4)$$

$$F = 2 \times 5x + 2 \times 4 + x \times 5x + x \times 4$$

$$F = 10x + 8 + 5x^2 + 4x$$

$$F = 5x^2 + 14x + 8$$

3 Même énoncé qu'à l'exercice 2.

$$G = (5t + 8)(2t - 7)$$

$$G = 5t \times 2t + 5t \times (-7) + 8 \times 2t + 8 \times (-7)$$

$$G = 10t^2 - 35t + 16t - 56$$

$$G = 10t^2 - 19t - 56$$

$$H = (2x - 5)(3x - 2)$$

$$H = 2x \times 3x + 2x \times (-2) + (-5) \times 3x + (-5) \times (-2)$$

$$H = 6x^2 - 4x - 15x + 10$$

$$H = 6x^2 - 19x + 10$$

$$J = (5y + 1)(2 - 3y)$$

$$J = 5y \times 2 + 5y \times (-3y) + 1 \times 2 + 1 \times (-3y)$$

$$J = 10y - 15y^2 + 2 - 3y$$

$$J = -15y^2 + 7y + 2$$

$$K = (-3 + z)(-2z - 5)$$

$$K = (-3) \times (-2z) + (-3) \times (-5) + z \times (-2z) + z \times (-5)$$

$$K = 6z + 15 - 2z^2 - 5z$$

$$K = -2z^2 + z + 15$$

4 Même énoncé qu'à l'exercice 2.

$$L = (4t + 3)^2$$

$$L = (4t + 3)(4t + 3)$$

$$L = 16t^2 + 12t + 12t + 9$$

$$L = 16t^2 + 24t + 9$$

$$M = (8u - 1)^2$$

$$M = (8u - 1)(8u - 1)$$

$$M = 64u^2 - 8u - 8u + 1$$

$$M = 64u^2 - 16u + 1$$

$$N = 6 + (5x - 2)(3 - 4x)$$

$$N = 6 + 15x - 20x^2 - 6 + 8x$$

$$N = -20x^2 + 23x$$

$$P = 5y - (4y + 3)(-2y - 5)$$

$$P = 5y - (-8y^2 - 20y - 6y - 15)$$

$$P = 5y + 8y^2 + 20y + 6y + 15$$

$$P = 8y^2 + 31y + 15$$

$$R = 6(2z - 1)(3 - z)$$

$$R = (12z - 6)(3 - z)$$

$$R = 36z - 12z^2 - 18 + 6z$$

$$R = -12z^2 + 42z - 18$$