Groupe :

Nom :

DISTRIBUTIVITÉ et DOUBLE DISTRIBUTIVITÉ

**Vision 1 / Section 1.3**

Distributivité

#1 Effectue les multiplications suivantes.

1. 2x (5x² - 3) =
2. 4a²b $\left(\frac{a}{5}+b\right)$ =
3. 2b (3a – 2) =
4. $x\left(5x+2r-\frac{5}{2}\right)$ =
5. $4ax \left(\frac{a}{2}+2x\right)$ =
6. 5x (8x² - 2x + 3) =
7. 3a²b (4a + 3b – 2) =
8. x (2x² + 4x – 8) =
9. ax² (3a + 5x – 1) =
10. $2n \left(\frac{n}{2}+3b\right)$ =
11. 2a (b – 7) + a (2b + 3) =
12. 6 (2x – 1) – (3x + 4) =
13. $\frac{m}{2}\left(2p+3\right)+2m \left(p-1\right)$ =
14. 3a² (2b – 5) + 2a (ab – 4a) =
15. 5y (2y – 1) + 3y (3 – y) =
16. 5x (2x – 2) + 3x (-x + 5) =
17. 2r² (r + 3) – 4r² (4 – r) =
18. –2a (9a + b) – 3a (2a – 1) =
19. 5ax (-x + 9) + 3ax (3x – 5) =
20. –2b (4a – 4) – (2ab + 6b) =



# Double distributivité

#2 Effectue les produits suivants et simplifie tes réponses.

1. (2a + b) (3a – 6) =
2. (6x + 8) (x – 5) =
3. (m + 4) (m – 5) =
4. (s – 7a) (2s + 2a) =
5. (3r – 5) (4r – 3) =
6. (x + 3y) (3x – 2y) =
7. (2s – a) (5s + 2a) =
8. (9 – t) (10 + 2t) =
9. (x – 1) (x + 1) =
10. (a – 2b) (a + 2b) =
11. (5x – 4y)² =

1. (2x + y)² =
2. (a – b)² =
3. (c + d)² =
4. 3x (x – y) + (2x – 5y)² =
5. (2x + 5y) (x – 3y) + (3x – y) (x – y) =
6. (a + 4b) (2a – 3b) – 4a (2a – 3b) =
7. (2c – 5d) (3c – d) – (c + 3d) (3c + d) =
8. (2x + 5y) (x – 3y) – (x – y) (3x – y) =
9. (5a – b) (6a + 5b) – (a – b) (a + b) =

#3 Simplifie les expressions suivantes :

1.  =
2.  =
3.  =
4.  =
5.  =
6.  =
7.  =
8.  =
9.  =
10.  =

#4 Effectue.

a) (a – b)2 =

b) 8x + 2(x – 3) – (4x – 5) (4x + 5) =

c) - ( + 1)2 - (x - 1) =

**Réponses:**

#1

|  |  |
| --- | --- |
| a) 10x³ - 6x | b) $\frac{4}{5}$a³b + 4a²b² |
| c) 6ab – 4b | d) 2rx + 5x² - $\frac{5}{2}$ x |
| e) 2a²x + 8ax² | f) 40x³ - 10x² + 15x |
| g) 12a³b + 9a²b² - 6a²b | h) x³ + 3x² - 6x |
| i) 3a²x² + 5ax³ - ax² | j) 6bn + n² |
| k) –11a + 4ab | l) 9x – 10 |
| m) –$ \frac{1}{2}$m + 3mp | n) –23a² + 8a²b |
| o) 7y² + 4y | p) 7x² + 5x |
| q) 6r³ - 10r² | r) –24a² + 3a – 2ab |
| s) 4ax² + 30ax | t) –10ab + 2b |

#2

|  |  |
| --- | --- |
| a)6a² - 12a + 3ab – 6b | b) 6x² - 22x – 40 |
| c) m² - m – 20 | d) –14a² - 12as + 2s² |
| e) 12r² - 29r + 15 | f) 3x² + 7xy – 6y² |
| g) –2a² - as + 10s² | h) –2t² + 8t + 90 |
| i) x² - 1 | j) a² - 4b² |
| k) 25x² - 40 xy + 16y² | l) 4x² + 4xy + y² |
| m) a² - 2ab + b² | n) c² + 2cd + d² |
| o) 7x² - 23xy + 25y² | p) 5x² - 5xy – 14y² |
| q) –6a² + 17ab – 12b² | r) 3c² - 27cd + 2d² |
| s) –x² + 3xy – 16y² | t) 29a² + 19ab – 4b² |

#3

|  |  |
| --- | --- |
| 1. x2 – x - 12
 | 1. x4 + x2 -12
 |
| 1. 2y3 – 3y2 + 3y
 | 1. 9x2 – 12xy + 4y2
 |
| 1. x2 + 4x + 2xy – 22y
 | f) -3x3 + 3x2y |
| g) –x3y + x2y2 + xy | h) - 4xy |
| i) -12x2 + 24x - 16 | j) 107x2 + 9x + 16 |

#4

1. $a^{2}- \frac{4}{3}ab+ \frac{4}{9}b^{2}$
2. -16x2 + 10x + 19
3. $-\frac{x^{2}}{4}- \frac{7}{4}x- \frac{1}{4}$