$$(x + a)(x + b) = x^2 + (a + b)x + ab$$

Factoriser : $x^2 + 11x + 24$

$$x^2 \boxed{+ 11x} \enclose{circle}{+ 24}$$

Trouver deux nombres qui
Multipliés donnent +24 et
Additionnés donnent +11
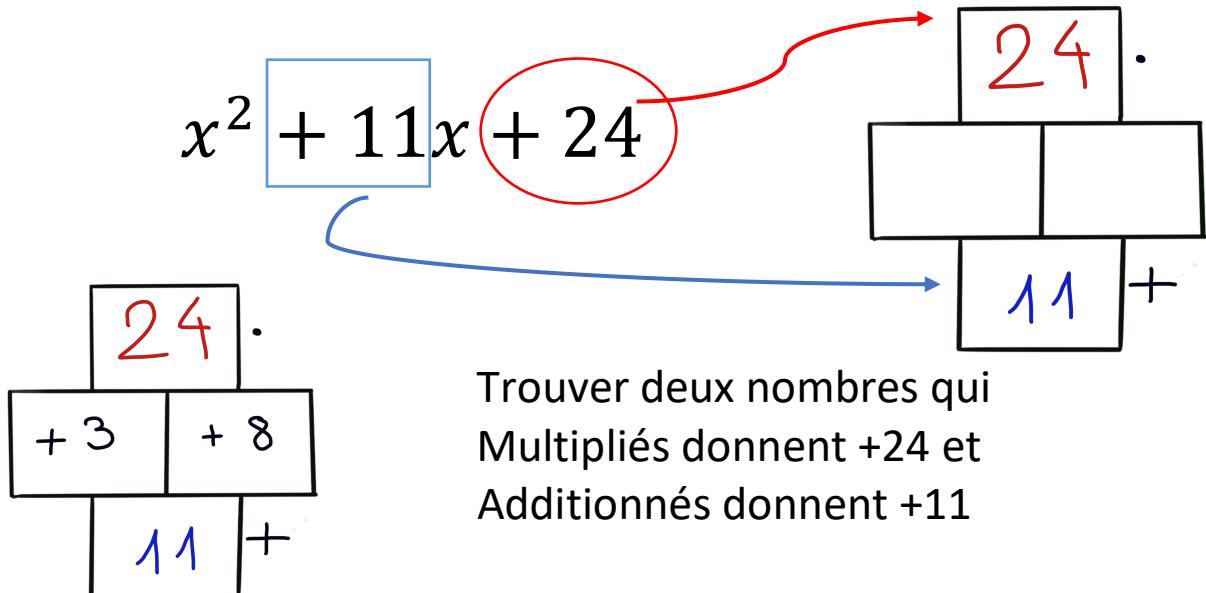
Solution : $x^2 + 11x + 24 = (x + 8)(x + 3)$

Factoriser : $x^2 - 5x - 84$

$$-12 \cdot (+7) = -84$$
$$-12 + (+7) = -5$$
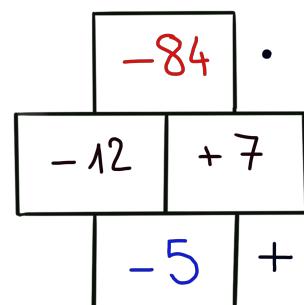
Solution : $x^2 - 5x - 84 = (x - 12)(x + 7)$

$$(x + a)(x + b) = x^2 + (a + b)x + ab$$
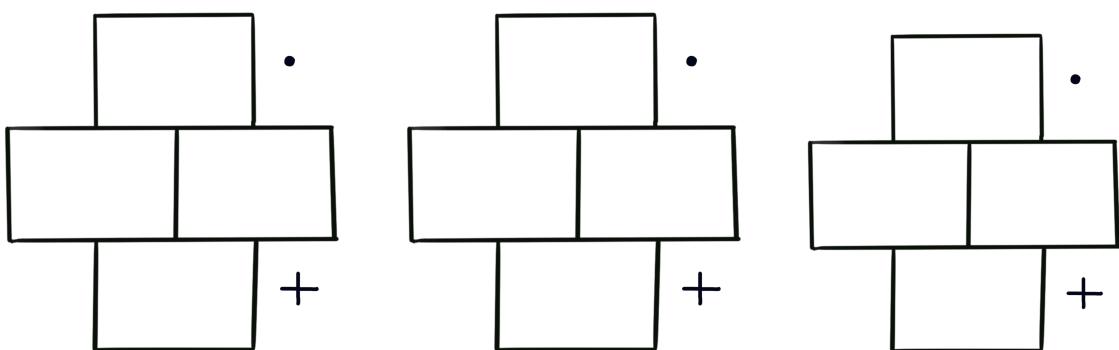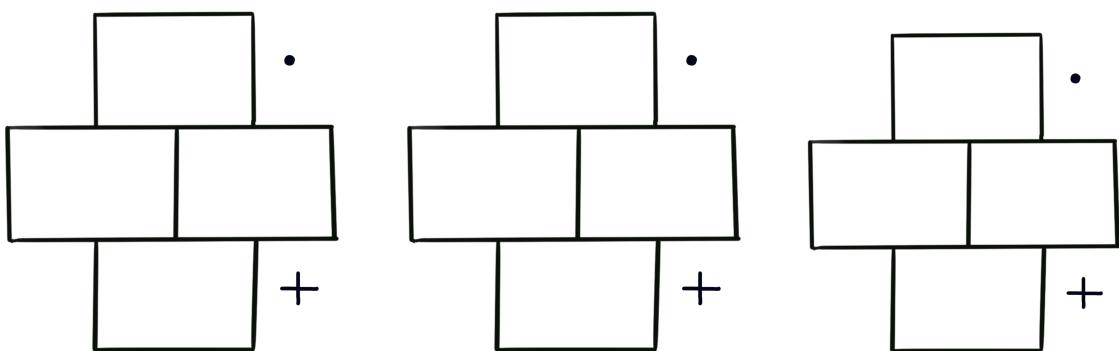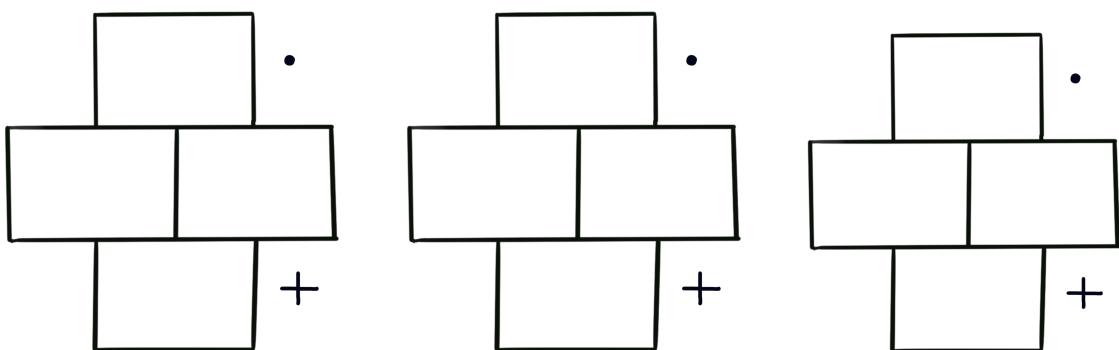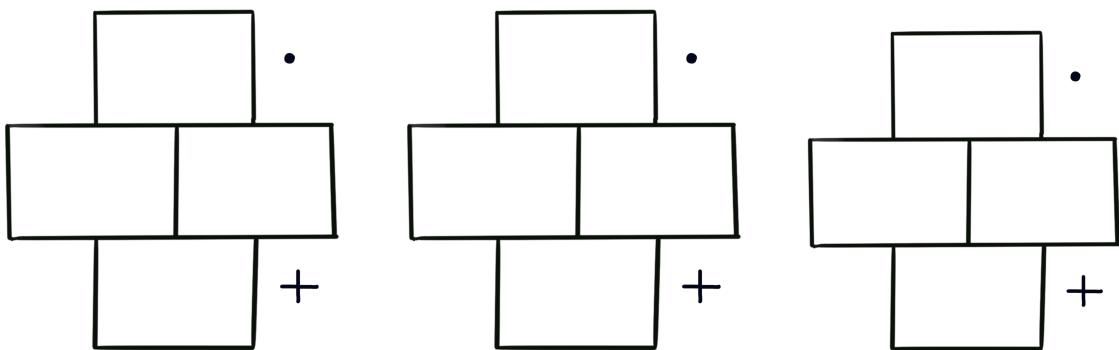
$$(x + a)(x + b) = x^2 + (a + b)x + ab$$

Exercice 1 : *Factorisez les polynômes suivants.*

1. $x^2 + 4x + 3$
2. $x^2 - 6x + 9$
3. $x^2 - 7x + 12$
4. $x^2 + 10x + 16$
5. $x^2 - 3x - 10$
6. $x^2 + 5x - 50$
7. $x^2 - 4x - 5$
8. $x^2 + 4x - 5$
9. $x^2 - x - 72$
10. $x^2 + 3x + 2$

11. $x^2 - 10x + 21$
12. $x^2 - 4x - 32$
13. $x^2 + 10x + 25$
14. $x^2 - 3x - 18$
15. $x^2 - 11x + 24$
16. $x^2 + 14x + 40$
17. $x^2 - 2x - 24$
18. $x^2 + x - 72$
19. $x^2 - 3x - 18$
20. $x^2 + 4x - 5$
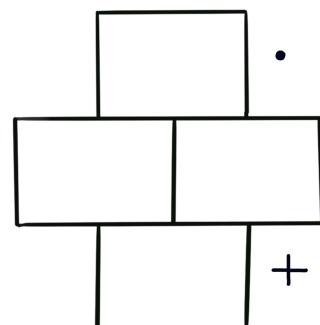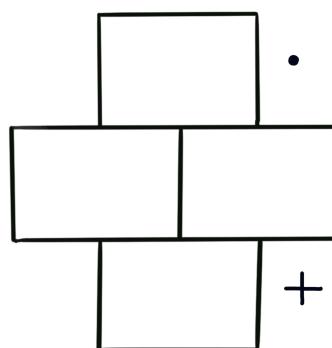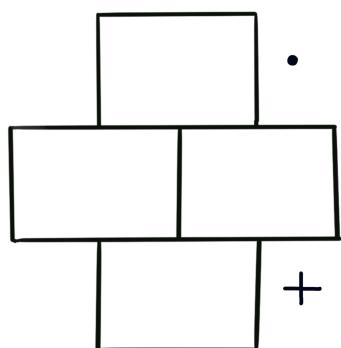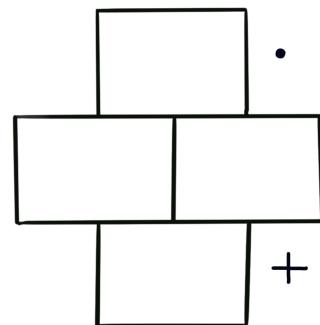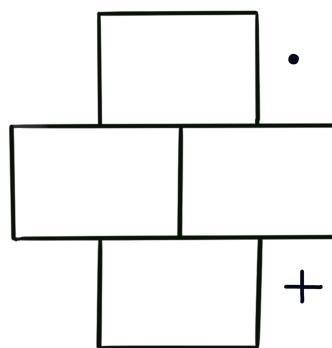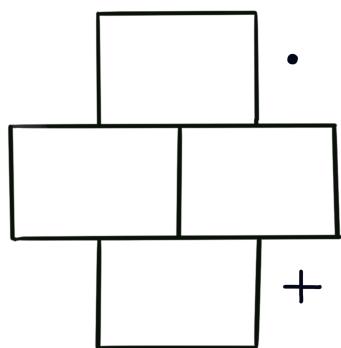
$$(x + a)(x + b) = x^2 + (a + b)x + ab$$

Exercice 2 : *Factorisez les polynômes suivants.*

1. $x^2 + 7x + 10$
2. $x^2 + 8x - 20$
3. $x^2 - 7x + 10$
4. $x^2 + 2x - 24$
5. $x^2 - 2x - 48$
6. $x^2 + 2x - 63$
7. $x^2 + 15x + 50$
8. $x^2 + 5x + 6$
9. $x^2 - 9x + 14$
10. $x^2 + 11x + 10$

11. $x^2 - x - 30$
12. $x^2 - 2x - 63$
13. $x^2 + 7x + 6$
14. $x^2 + 12x + 36$
15. $x^2 - 49$
16. $x^2 + 4x - 45$
17. $x^2 - 7x + 10$
18. $x^2 + 6x + 8$
19. $x^2 + 3x - 4$
20. $x^2 - 6x + 5$

Solutions Exercice 1 :

1) **(x + 3) (x + 1)** 2) **(x - 3) (x - 3)** 3) **(x - 3) (x - 4)** 4) **(x + 2) (x + 8)**
5) **(x - 5) (x + 2)** 6) **(x + 10) (x - 5)** 7) **(x - 5) (x + 1)** 8) **(x + 5) (x - 1)**
9) **(x + 8) (x - 9)** 10) **(x + 2) (x + 1)** 11) **(x - 3) (x - 7)** 12) **(x - 8) (x + 4)**
13) **(x + 5) (x + 5)** 14) **(x + 3) (x - 6)** 15) **(x - 3) (x - 8)** 16) **(x + 10) (x + 4)**
17) **(x - 6) (x + 4)** 18) **(x + 9) (x - 8)** 19) **(x - 6) (x + 3)** 20) **(x + 5) (x - 1)**

Solutions Exercice 2

1) **(x + 2) (x + 5)** 2) **(x + 10) (x - 2)** 3) **(x - 5) (x - 2)** 4) **(x - 4) (x + 6)**
5) **(x + 6) (x - 8)** 6) **(x + 9) (x - 7)** 7) **(x + 10) (x + 5)** 8) **(x + 3) (x + 2)**
9) **(x - 7) (x - 2)** 10) **(x + 10) (x + 1)** 11) **(x + 5) (x - 6)** 12) **(x + 7) (x - 9)**
13) **(x + 6) (x + 1)** 14) **(x + 6) (x + 6)** 15) **(x + 7) (x - 7)** 16) **(x + 9) (x - 5)**
17) **(x - 5) (x - 2)** 18) **(x + 2) (x + 4)** 19) **(x - 1) (x + 4)** 20) **(x - 5) (x - 1)**

Plus d'exercices ? https://gomaths.ch/