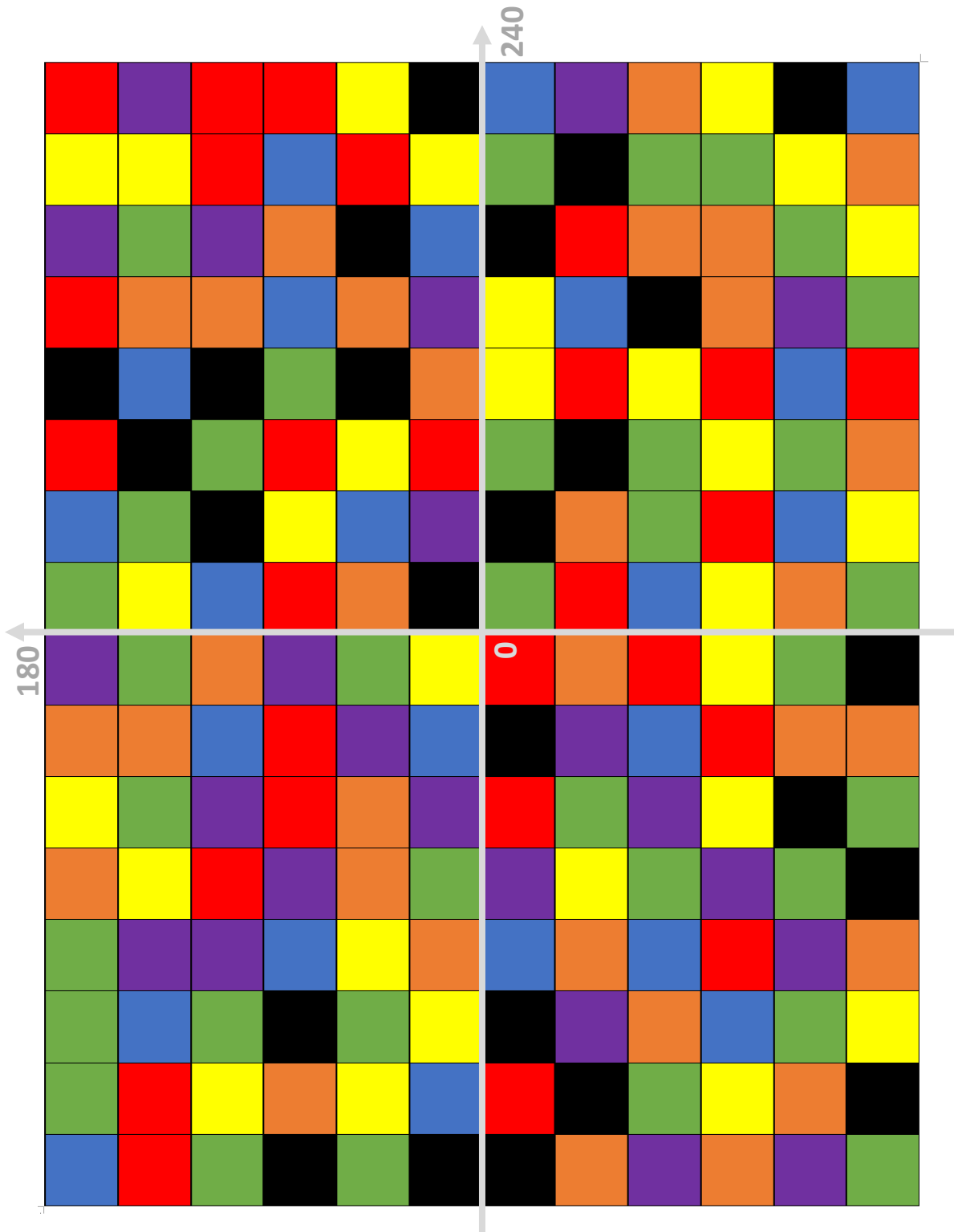


Pochette

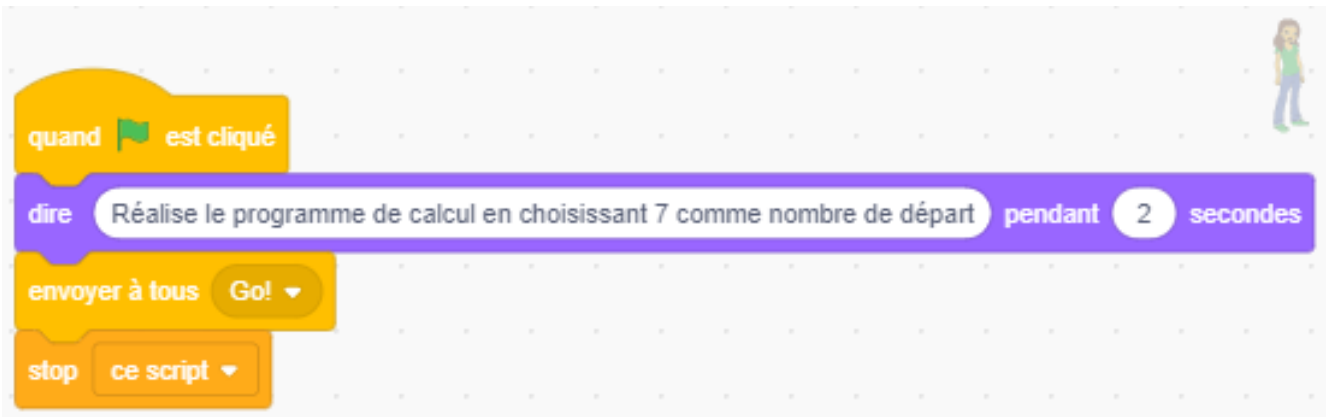


Boite 1



```
quand [drapeau] est cliqué
mettre la taille à 20 % de la taille initiale
aller à x: -45 y: 75
dire [ICI!] pendant 2 secondes
attendre 1 secondes
si couleur [violet] touchée ? alors
  aller à x: 135 y: -15
sinon
  aller à x: -195 y: -75
dire [ICI!] pendant 2 secondes
attendre 1 secondes
répéter 10 fois
  ajouter 15 à x
  ajouter 3 à y
attendre 1 secondes
répéter jusqu'à ce que [non] couleur [violet] touchée ?
  ajouter -30 à x
  ajouter -30 à y
  attendre 0.5 secondes
dire [ICI!] pendant 2 secondes
attendre 1 secondes
répéter 6 fois
  ajouter 45 à x
  ajouter 15 à y
  attendre 0.5 secondes
dire [ICI!] pendant 2 secondes
attendre 1 secondes
glisser en 1 secondes à x: 45 y: 135
dire [ICI!] pendant 2 secondes
attendre 1 secondes
stop [tout]
```

Boite 2



A Scratch script on a grid background. The script starts with a yellow 'when green flag is clicked' block. This is followed by a purple 'say' block with the text 'Réalise le programme de calcul en choisissant 7 comme nombre de départ' and a duration of '2' seconds. Next is a yellow 'send to all' block with a 'Go!' button. The script ends with an orange 'stop this script' block. A small character icon is visible in the top right corner of the workspace.

```
quand [drapeau vert] est cliqué  
dire [Réalise le programme de calcul en choisissant 7 comme nombre de départ] pendant 2 secondes  
envoyer à tous [Go! ▼]  
stop [ce script ▼]
```

Pochette

The image shows a Scratch script on a grid background. The script starts with a yellow 'when I receive' block containing 'Go!'. This is followed by a blue 'ask and wait' block with the text 'Choisis un nombre'. Then, there are four orange 'set' blocks: the first sets 'Nombre' to '8 * réponse', the second sets 'Nombre' to 'Nombre - 1', the third sets 'Nombre' to 'Nombre / 11', and the fourth sets 'Nombre' to 'Nombre * 29'. This is followed by a purple 'say' block with 'regrouper' selected, the text 'Le résultat est ...', 'Nombre' selected for the variable, and '2 secondes' for the duration. The script ends with an orange 'stop' block set to 'ce script'.

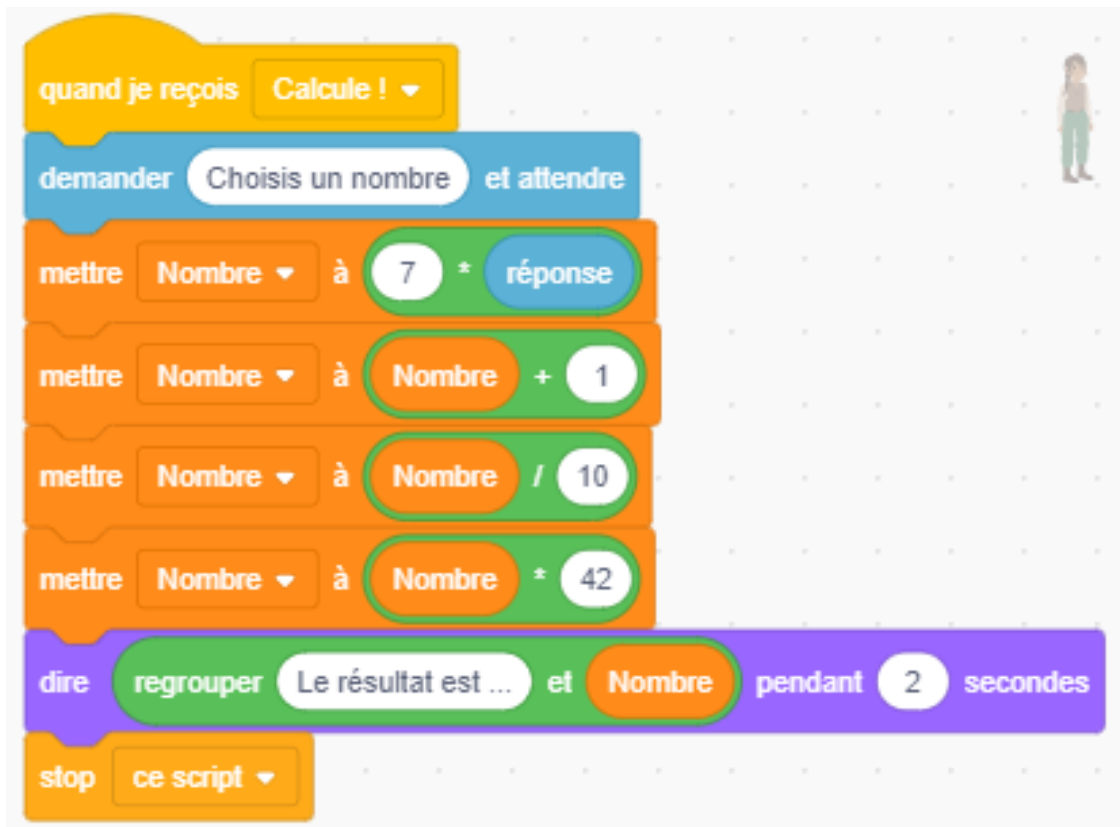
```
when I receive Go!  
ask Choisis un nombre and wait  
set Nombre to 8 * réponse  
set Nombre to Nombre - 1  
set Nombre to Nombre / 11  
set Nombre to Nombre * 29  
say regroup Le résultat est ... et Nombre pendant 2 secondes  
stop ce script
```

Pochette

A Scratch script for a 'Pochette' (envelope) game. The script starts with a yellow 'when I receive' block with the event 'Départ !'. This is followed by a blue 'ask' block with the text 'Choisis un nombre' and the 'wait' option. The next block is an orange 'set' block for a variable named 'Nombre', with the value $7 * \text{réponse} + 1 / 10 * 37$. This is followed by a purple 'say' block with the text 'Le résultat est ... et Nombre pendant 2 secondes', where 'réponse' is replaced by the 'Nombre' variable. The script ends with an orange 'stop' block with the option 'ce script'.

```
quand je reçois Départ !  
demander Choisis un nombre et attendre  
mettre Nombre à  $7 * \text{réponse} + 1 / 10 * 37$   
dire regrouper Le résultat est ... et Nombre pendant 2 secondes  
stop ce script
```

Pochette




A Scratch script for a calculator application. The script starts with a yellow 'when I receive' block containing a 'Calculate!' button. This is followed by a blue 'ask' block that prompts the user to 'Choose a number' and then waits. The script then consists of four orange 'set' blocks, each taking the value of 'Number' and performing a calculation: multiplying by 7, adding 1, dividing by 10, and multiplying by 42. These are followed by a purple 'say' block that displays the result as 'The result is ...' followed by the value of 'Number' for 2 seconds. The script ends with a yellow 'stop' block labeled 'end of script'.

```
when I receive Calculate!  
ask Choisis un nombre et attendre  
set Number to 7 * réponse  
set Number to Nombre + 1  
set Number to Nombre / 10  
set Number to Nombre * 42  
say regrouper Le résultat est ... et Nombre pendant 2 secondes  
stop ce script
```

Pochette



```
quand  est cliqué
fixer le sens de rotation gauche-droite
aller à x: 0 y: 0
s'orienter en direction de 90
avancer de 30 pas
attendre 1 secondes
s'orienter en direction de 180
avancer de 150 pas
attendre 1 secondes
s'orienter en direction de -90
avancer de 250 pas
attendre 1 secondes
s'orienter en direction de 0
avancer de 150 pas
attendre 1 secondes
répéter 7 fois
  ajouter 35 à x
  ajouter 11 à y
  attendre 0.5 secondes
dire regrouper Essaye avec et abscisse x * ordonnée y pendant 2 secondes
stop tout
```

Boite 2

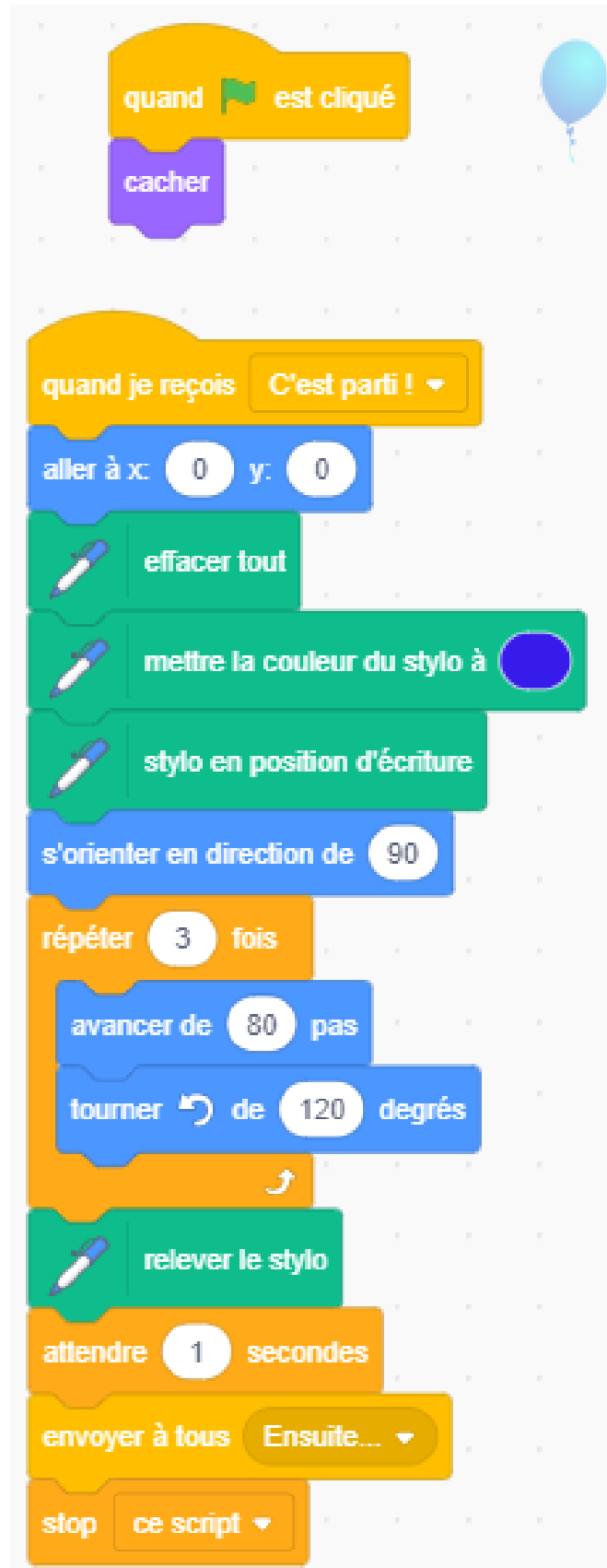


Boite 1

The image shows a Scratch script for a character named 'Boite 1'. The script is triggered by a 'when clicked' event and includes the following actions:

- hide
- when I receive a message (dropdown: Ensuite...)
- go to x: 0 y: 0
- erase everything
- set pen color to blue
- pen down
- turn 90 degrees
- move 80 steps
- turn 0 degrees
- move 80 steps
- turn 135 degrees
- move 140 steps
- turn -135 degrees
- move 140 steps
- turn 0 degrees
- move 80 steps
- turn -90 degrees
- move 80 steps
- turn 0 degrees
- move 40 steps
- wait 1 seconds
- send message to all (dropdown: Encore !)
- stop this script

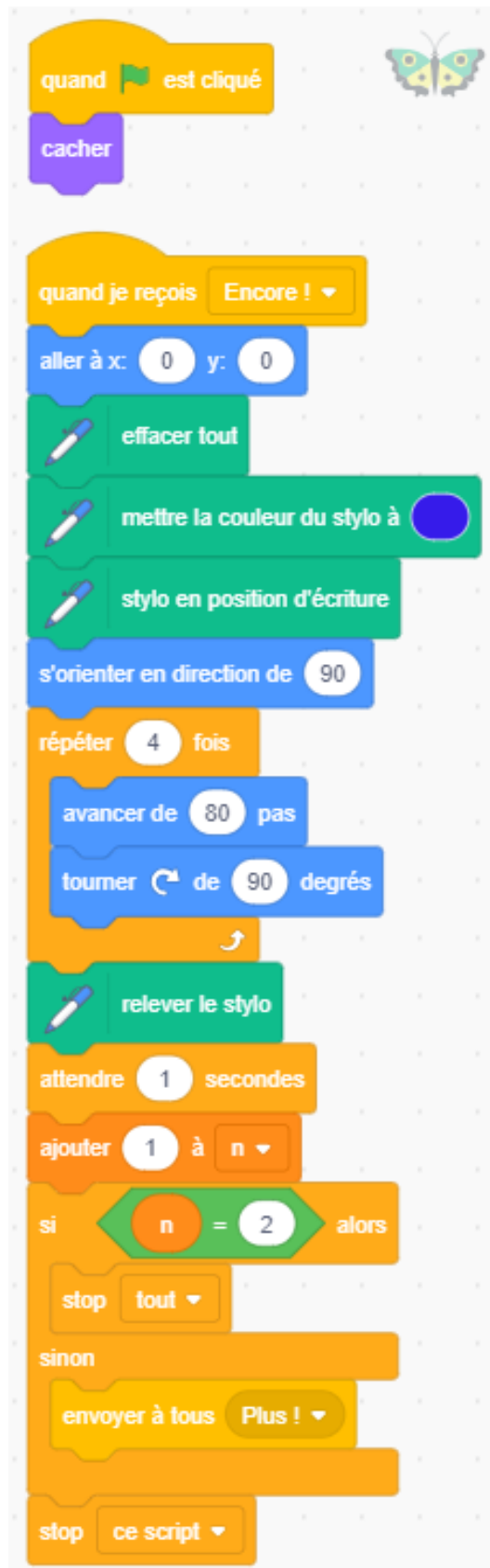
Pochette



The image shows a Scratch script on a grid background. At the top right, there is a blue balloon icon. The script consists of the following blocks:

- when green flag is clicked** (yellow block) containing:
 - hide** (purple block)
- when I receive C'est parti !** (yellow block)
- go to x: 0 y: 0** (blue block)
- erase everything** (green block)
- set pen color to** (green block) with a blue circle color picker.
- pen down** (green block)
- turn to direction of 90** (blue block)
- repeat 3 times** (orange block) containing:
 - move 80 steps** (blue block)
 - turn 120 degrees** (blue block)
- lift pen** (green block)
- wait 1 seconds** (orange block)
- broadcast to all Ensuite...** (yellow block)
- stop this script** (orange block)

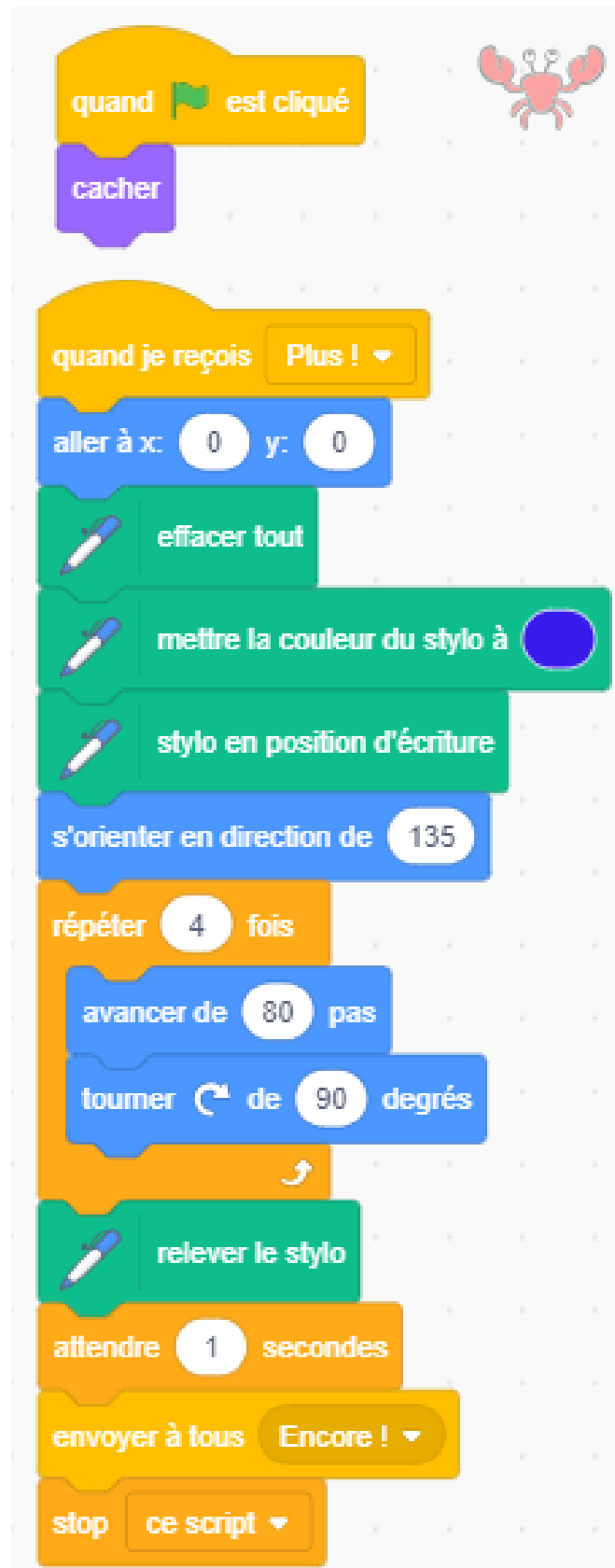
Boite 1



The image shows a Scratch script on a grid background. At the top right, there is a butterfly icon. The script starts with a yellow 'when clicked' block, followed by a purple 'hide' block. Then, a yellow 'when I receive' block is set to 'Encore !'. This is followed by a blue 'go to x: 0 y: 0' block, a green 'erase everything' block, a green 'set pen color to' block with a blue circle, a green 'pen down' block, a blue 'set direction to 90' block, and an orange 'repeat 4 times' loop. Inside the loop are three blue blocks: 'move 80 steps', 'turn 90 degrees', and a green 'lift pen' block. After the loop, there is a yellow 'wait 1 seconds' block, an orange 'add 1 to n' block, a green 'if n = 2 then' block containing a yellow 'stop all' block, and a yellow 'send message Plus !' block. The script ends with a yellow 'stop this script' block.

```
when clicked →  
  cacher  
  
when I receive Encore !  
  aller à x: 0 y: 0  
  effacer tout  
  mettre la couleur du stylo à [blue]  
  stylo en position d'écriture  
  s'orienter en direction de 90  
  répéter 4 fois  
    avancer de 80 pas  
    tourner 90 degrés  
  relever le stylo  
  attendre 1 secondes  
  ajouter 1 à n  
  si n = 2 alors  
    stop tout  
  sinon  
    envoyer à tous Plus !  
  stop ce script
```

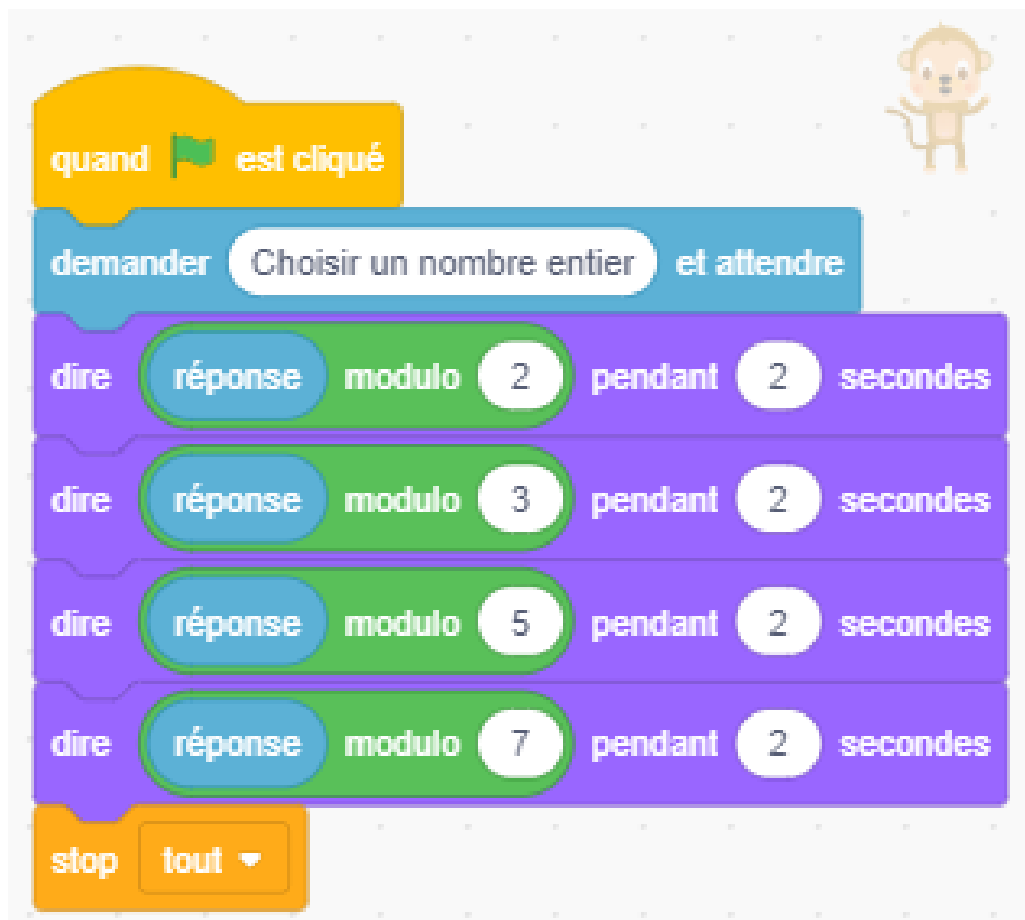
Pochette



The image shows a Scratch script on a grid background. At the top right, there is a small red crab icon. The script consists of the following blocks:

- quand [drapeau] est cliqué** (when green flag clicked)
- cache** (hide)
- quand je reçois [Plus !]** (when I receive Plus !)
- aller à x: 0 y: 0** (go to x: 0 y: 0)
- effacer tout** (erase all)
- mettre la couleur du stylo à [bleu]** (set pen color to blue)
- stylo en position d'écriture** (pen down)
- s'orienter en direction de 135** (turn to face 135)
- répéter 4 fois** (repeat 4 times) loop containing:
 - avancer de 80 pas** (move 80 steps)
 - tourner de 90 degrés** (turn 90 degrees)
- relever le stylo** (pen up)
- attendre 1 secondes** (wait 1 seconds)
- envoyer à tous [Encore !]** (broadcast to all Encore !)
- stop ce script** (stop this script)

Boite 1



The image shows a Scratch script on a grid background. In the top right corner, there is a small cartoon monkey icon. The script starts with a yellow 'when green flag is clicked' block. This is followed by a blue 'ask' block with the text 'Choisir un nombre entier' and 'et attendre'. Below this are four purple 'say' blocks, each with 'réponse' in a blue bubble, 'modulo' in a green bubble, a number in a white circle, 'pendant' in a white circle, and '2 secondes'. The numbers are 2, 3, 5, and 7 respectively. The script ends with an orange 'stop' block with a dropdown menu set to 'tout'.

```
quand [drapeau vert] est cliqué  
demander Choisir un nombre entier et attendre  
dire réponse modulo 2 pendant 2 secondes  
dire réponse modulo 3 pendant 2 secondes  
dire réponse modulo 5 pendant 2 secondes  
dire réponse modulo 7 pendant 2 secondes  
stop tout
```

Pochette

Quel est le plus petit nombre qu'il ait
été possible de donner au singe ?

Pochette

Le bloc « modulo » donne le reste de la division euclidienne du premier nombre par le second.

Par exemple $17 \text{ modulo } 5$ donne 2

Car $17 = 5 \times 3 + 2$

Pochette

