

Exercice 1 *5 points*

1. c.
2. b.
3. b.
4. b.
5. b.

Exercice 2 *3 points*

```
1  p.empile(a)
2  p.empile(b)
3  a = p.depile()
4  b = p.depile()
```

Exercice 3 *4 points*

```
1  class Pile:
2      def __init__(self):
3          self.data = []
4
5      def est_vide(self):
6          return len(self.data) == 0
7
8      def empile(self,x):
9          self.data.append(x)
10
11     def depile(self):
12         if self.est_vide() == True :
13             raise IndexError('pile_vide_')
14         else :
15             return self.data.pop()
```

Exercice 4 *8 points*

1.

```
1  def inverse(p):
2      f = File()
3      while not p.est_vide():
4          elt = p.depile()
5          f.enfile(elt)
6      while not f.est_vide():
7          elt = f.defile()
8          p.empile(elt)
```

2.

```
1  def copie(p):
2      p_temp = Pile()
3      p_copy = Pile()
4      while not p.est_vide():
5          elt = p.depile()
6          p_temp.empile(elt)
7      while not p_temp.est_vide():
8          elt = p_temp.depile()
9          p_copy.empile(elt)
10     p.empile(elt)
11     return p_copy
```