

```
import numpy as np
a = np.array([1, 2, 3])
b = np.array([4, 5, 6])
x = 3 * b + a
```

After above the code executes what is the value of `x`?

- A. 13
- B. `np.array([13, 17, 21])`
- C. `np.array([15, 21, 27])`
- D. `np.array([7, 7, 9])`

Answer: B

`3*b` is `np.array([12, 15, 18])` and the addition is element-wise so the result is `np.array([13, 17, 21])`

```
import numpy as np
a = np.array([1, 2, 3])
b = np.array([4, 5, 6])
x = np.sum(np.power(b-a, 2))
```

After above the code executes what is the value of `x`?

- A. 13
- B. 21
- C. 27
- D. `np.array([27, 27, 27])`

Answer: C

`b-a` is `np.array([3, 3, 3])` thus the element-wise power operation produces `np.array([9, 9, 9])`. The resulting sum of that vector is the scalar 27.