

The following code contains the missing numbers.

```
ap_int<2> encoder4x2(ap_uint<4> a) {
    ap_int<2> code;

    if (a[3] == 1) {
        code = 3;
    } else if (a[2] == 1) {
        code = 2;
    } else if (a[1] == 1) {
        code = 1;
    } else {
        code = 0;
    }

    return code;
}
```