

COMP 230: Pointer Exercise

What will be printed when the following code segments execute in C?

```
1. int a = 3;
   int* ap = &a;
   *ap = 4;
   printf("%d\n", a);
```

```
2. int x = 7;
   int y = 8;
   int* xp = 5;
   int* yp = 6;
   printf("%d\n", x);
   printf("%d\n", y);
```

```
3. int a = 3;
   int* ap = &a;
   int b = 5;
   b = *ap;
   printf("%d\n", b);
```

```
4. int x, y;
   int* xp = &x;
   int* yp = &y;
   int* tp;

   tp = yp;
   yp = xp;
   xp = tp;

   *xp = 5;
   *yp = 3;
   printf("%d\n", x);
   printf("%d\n", y);
```

```
5. int a[4] = {1, 2, 3, 4};
   int* b = a;
   b++;
   printf("%d\n", b[0]);
```

```
6. int a[3] = {1, 2, 3};
   int* b = &(a[2]);
   *(b - a[0]) = 12;
   printf("%d, %d, %d\n", a[0], a[1], a[2]);
```

```
7. int a[3] = {1, 2, 3};
   int b[3] = {1, 2, 3};
   int* c = b;
   c += 4;
   *c = 12;
   printf("%d, %d, %d\n", a[0], a[1], a[2]);
```