

NAME _____

(1) (15 points) Print the values resulting from the following code fragment. **Careful, at least one of these statements has an effect on a later statement. SHOW WORK!!**

```
int x = 5, y = 2, r[10] = {2, 4, 6, 8, 10, 12, 14, 16, 18, 20}, *ip;
```

```
ip = &r[1] + 2;
```

```
x = *ip;
```

```
printf ("%d, %d" , x, *(ip+1)); ANSWER:
```

```
printf ("%d", ip[2]++); ANSWER:
```

```
y = *(&r[1]+4);
```

```
ip -= 2;
```

```
printf ("%d, %d", *ip, y); ANSWER:
```

(2) (15 points) Write a function memdup with the following functional prototype:

```
void *memdup(void *obj, int size);
```

The argument obj is a pointer to some object, probably a struct or an array, and the argument size is the size in bytes of the object. The function memdup should malloc space for a new copy of the object, and copy the object pointed to by obj to the newly malloced space, returning the pointer to the new copy. Note that memdup() should return NULL if malloc returns an error. You need the library function memcpy() to copy the object; strcpy() won't work!

