1) (5 pts) ALG (Dynamic Memory Management in C)

The following function has 5 memory management issues, each one occurring on a different one of the 17 labeled lines of code. Please clearly list which five lines of code have the errors on the slots provided below. **Please list exactly five unique line numbers in between 1 and 17, inclusive. <u>An automatic grade of 0 will be given to anyone who lists MORE than 5 line numbers.</u>**

```
int n = 10;                               // line 1
int *p1, *p2, *p3, **p4;                  // line 2
char str1[100] = "test string ";          // line 3
char *str2;                               // line 4
strcpy(str2, str1);                       // line 5
p1 = (int *)malloc(n * sizeof(int));      // line 6
p2 = (int *)malloc(n * sizeof(int));      // line 7
for(int i=0; i<n; i++)                    // line 8
    p1[i] = rand()%100;                   // line 9
p2 = p1;                                  // line 10
*p3 = 50;                                 // line 11
p4 = (int **) malloc(n * sizeof(int*));   // line 12
for(int i=0; i<n; i++)                    // line 13
    p4[i] = -5;                           // line 14
free(p1);                                 // line 15
free(p2);                                 // line 16
free(p4);                                 // line 17
```

Lines with Memory Management Errors: _____ , _____ , _____ , _____ , _____