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IAME:			

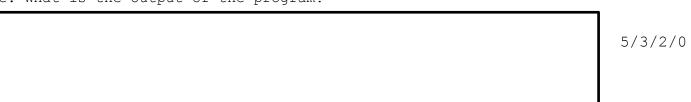
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d. Draw the stack diagram at mark (54 and explain briefly:



e. What is the output of the program?



2. What is the largest signed short? Explain.

5/3/2/0

3. Write a format print string to output the number as a percent with only 2 trailing decimals. e.g., "20.05%".

```
float perc = 0.2005;
printf( );
```

4. Consider the program below and found in ic221/hws/03/prog2 (compile with math library like so: gcc -lm prog2) 10/8/3/0 #include <stdlib.h> a. What does this #include <stdio.h> program do? (hint: use #include <math.h> the man page to look #include <ctype.h> up functions you don't know.) int main(){ char s[10]; double t = 0.0, x; while(fscanf(stdin,"%s",s) == 1){ if (isdigit(s[0])) t += sin(atoi(s)); } fprintf(stdout, "%f\n",t); return 0; } b. Provide an input that would make this program crash. Why would it crash? 10/8/3/0

5. Why will this program terminate? That is, what condition will make the while loop below will break.

```
#include <stdio.h>
#include <stdlib.h>
#include <ctype.h>

int main(int argc, char * argv){
    char goodbye[100] = "Goodbye cruel world!";
    char *p = goodbye;

    while(*p){
        printf("%c", toupper(*p));
        p++;
    }
}
```

15/8/3/0