

#1 תרגיל - פרויקט תוכנה

מגישים:

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ודים סטוטלנד

(1)

exp:

```
#include <stdio.h>
#include <math.h>

int main(void)
{
    double num;
    double sum = 1;
    double temp = 1;
    int i;

    scanf("%lf", &num);
    for (i=1; i<=20; i++){
        temp *= (num/i);
        sum += temp;
    }

    printf("%lf\n",sum);
    return 0;
}
```

(2)

exp_limit:

```
#include <stdio.h>
#include <math.h>

int main(void)
{
    double num;
    double sum = 1;
    double temp = 1;
    int i = 1;

    scanf("%lf", &num);
    while (temp != 0) {
        temp *= (num/i);
        sum += temp;
        i += 1;
    }
}
```

```
}

printf("%lf %d\n",sum,(i-2));
return 0;
}
```

(3)

get_digit:

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

int main(void){
    int i, num_of_digits;
    long num;

    scanf("%ld", &num);
    if (num == 0) num_of_digits = 1;
    else num_of_digits = floor(log10(fabs(num))+1);
    printf("%d\n", num_of_digits);

    scanf("%d", &i);
    if (i > num_of_digits) printf("ERROR: invalid digit number\n");
    else printf("%d\n", (int)(floor((fabs(num)/pow(10, (i-1)))))%10);

    return 0;
}
```