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Subject: CSE 108	

Problem 1: C program to find sum of the square of all natural numbers from 1 to N.

```
#include <stdio.h>

int main() {

    int n = 10;

    int sum = (n * (n + 1) * (2 * n + 1)) / 6;

    printf("The sum of squares of %d natural numbers is %d",n, sum);

    return 0;

}
```

Problem 2: Z. Hard Compare

```
#include <stdio.h>

#include <math.h>

int main() {

    int a, b, c, d;

    printf("Enter four integers a, b, c, d: ");

    scanf("%d %d %d %d", &a, &b, &c, &d);

    float powerAB = pow(a, b);

    float powerCD = pow(c, d);

    if (powerAB > powerCD) {

        printf("YES\n");

    } else {

        printf("NO\n");

    }

}
```

```
    return 0;
}
```

Problem 3: C program to find sum of following series: $1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \frac{1}{5} + \dots \frac{1}{N}$

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

```
int main() {
```

```
    int N;
```

```
    float sum = 0.0;
```

```
    printf("Enter a natural number N: ");
```

```
    scanf("%d", &N);
```

```
    for (int i = 1; i <= N; i++) {
```

```
        sum += 1.0 / i;
```

```
    }
```

```
    // Output the result
```

```
    printf("The sum of the series up to %d is: %.6f\n", N, sum);
```

```
    return 0;
```

```
}
```

Problem 4: C program to find sum of following series: $1 + \frac{3^2}{3^3} + \frac{5^2}{5^3} + \frac{7^2}{7^3} + \dots$ till N terms

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

```
int main() {
```

```
float n, i, sum = 0;

printf("Enter the value fo n: ");

scanf("%f", &n);


for(i = 1; i <= n; i = i + 2){

    sum = sum + (1 / i);

}

printf("Sum of series: %f\n", sum);

return 0;

}
```