This *exit survey* will not count as part of your grade in this class, it is being administered in order to determine the current state of your knowledge. The results will be used to access how our curriculum is preparing you, and may factor in future curriculum changes.

For each question you may answer **I don't know how to solve it**, **I know how to solve it, but I forgot**, or **I know how to solve it, and here's what I think the solution is.**

Name:

EECE 331 Data Structures. Exit Survey

1. Given a coin in which the probability of heads is $\frac{1}{4}$ and the probability of tails is $\frac{3}{4}$, what tis the expected number of heads in an experiment involving three coin tosses?

   I know how but I forgot

?

2. A bottle contains five marbles numbered 1–5. How many different ways are there to select two balls from the bottle? If two marbles are selected at random, what is the probability that the balls numbered 1 and 2 are selected?

   ~~I don't know how to solve it~~

   I know how but I forgot

Student 1

3. Use induction to prove the following: $\sum_{k=1}^{n} k^2 = \frac{n(n+1)(2n+1)}{6}$.

~~I don't know how to solve it.~~

I know how to solve it, but forgot

4. What is the running time of the following algorithm?

```
F(n)
    for i ← 1 to n do
        for j ← 1 to n do
            temp ← temp + i · j
    return temp
```

~~I don't know how to solve it.~~

I know how to solve it.

$\Theta(n^2)$

5. Write a program, using pseudocode or the programming language of your choice, to compute the mean value of a set of n numbers supplied as input.

~~I don't Know how to solve it.~~

I Know how to solve it, but forgot

```
int A[ ]
  for i ← 1 to n
     sum += A[i]

 mean = ⌊sum/2⌋
```

This *exit survey* will not count as part of your grade in this class, it is being administered in order to determine the current state of your knowledge. The results will be used to access how our curriculum is preparing you, and may factor in future curriculum changes.
For each question you may answer **I don't know how to solve it, I know how to solve it, but I forgot**, or **I know how to solve it, and here's what I think the solution is.**

Name:

EECE 331 Data Structures. Exit Survey

1. Given a coin in which the probability of heads is $\frac{1}{4}$ and the probability of tails is $\frac{3}{4}$, what tis the expected number of heads in an experiment involving three coin tosses?

$$P = P[h] = \frac{1}{4} \quad ; \quad P[t] = 1 - p(h) = 3/4$$

$$E[X] = \sum p[h] = \frac{3}{4} / 3 = \frac{1}{4}$$

X

2. A bottle contains five marbles numbered 1–5. How many different ways are there to select two balls from the bottle? If two marbles are selected at random, what is the probability that the balls numbered 1 and 2 are selected?

return the ball after get selected?

assuming no return

$$\binom{5}{2} = \frac{5!}{2!\,(5-2)!} = \frac{4 \cdot 5}{2} = 10 \text{ ways}$$

$$P[X=2] = \frac{2}{20} = \frac{1}{10}$$

Repeat

	1	2	3	4	5
1	X	✓			
2	✓	X			
3			X		
4				X	
5					X

Student 2

3. Use induction to prove the following: $\sum_{k=1}^{n} k^2 = \frac{n(n+1)(2n+1)}{6}$.

$n = 1 \rightarrow \sum_1^1 = 1^2 = 1$

$n = 2 \rightarrow \sum_1^2 = 1^2 + 2^2 = 5$

$k: 1 \rightarrow n-1 \rightarrow \sum_1^{n-1} = 1^2 + 2^2 + (n-2)^2 + (n-1)^2$

$= 1^2 + 2^2 + \dots + n^2 + 4 - 4n + n^2 - 2n + 1$

$2n^2 - 6n + 5$

$\cancel{(n+1)}(2n+5)$

$(n+1)(2n+5)$

$\Rightarrow \sum_{n=1}^{n} k^2 = 1^2 + 2^2 + \dots + (n-2)^2 + (n-1)^2 + n^2$

$= \frac{n(n+1)(2n+1)}{6}$

4. What is the running time of the following algorithm?

```
F(n)
    for i ← 1 to n do              n times
        for j ← 1 to n do          n time
            temp ← temp + i · j    1
    return temp
```

$T(n) = \Theta(n^2)$

not sure

5. Write a program, using pseudocode or the programming language of your choice, to compute the mean value of a set of n numbers supplied as input.

~~for i ← 1 to n~~

~~total ← total + A[~~

```
mean (A)
    total ← 0
    for i ← 1 to length[A)
        total ← total + A[i]

    mean ← total/length
    return mean.
```

This *exit survey* will not count as part of your grade in this class, it is being administered in order to determine the current state of your knowledge. The results will be used to access how our curriculum is preparing you, and may factor in future curriculum changes.
For each question you may answer **I don't know how to solve it, I know how to solve it, but I forgot**, or **I know how to solve it, and here's what I think the solution is.**

Name:

EECE 331 Data Structures. Exit Survey

1. Given a coin in which the probability of heads is $\frac{1}{4}$ and the probability of tails is $\frac{3}{4}$, what tis the expected number of heads in an experiment involving three coin tosses?

$$P(0) = p^0 (q)^3 = 1\left(\frac{3}{4}\right)^3 = \frac{27}{64}$$
$$P(1) = 3\left(\frac{1}{4}\right)\left(\frac{3}{4}\right)^2 = \left(\frac{1}{4}\right)\left(\frac{9}{16}\right) = \frac{27}{64}$$
$$P(2) = \binom{3}{2}\left(\frac{1}{4}\right)^2\left(\frac{3}{4}\right) = 3\left(\frac{1}{16}\right)\left(\frac{3}{4}\right) = \frac{9}{64}$$
$$P(3) = \left(\frac{1}{4}\right)^3(1) = \frac{1}{64}$$
$$E[X] = 0\left(\frac{27}{64}\right) + \left(\frac{27}{64}\right) + \left(\frac{18}{64}\right) + \left(\frac{1}{64}\right) = \left(\frac{36}{64}\right) = \boxed{\frac{9}{16}}$$

2. A bottle contains five marbles numbered 1–5. How many different ways are there to select two balls from the bottle? If two marbles are selected at random, what is the probability that the balls numbered 1 and 2 are selected?

$$\frac{5 \times 4 \times 3 \times 2 \times 1}{2 \times 1} = 60$$

Student 3

Understands concept

3. Use induction to prove the following: $\sum_{k=1}^{n} k^2 = \frac{n(n+1)(2n+1)}{6}$.

$$\sum_{k=1}^{n} k^2 = \frac{n(n+1)(2n+1)}{6}$$

$$1 = 1 \rightarrow 1 = \frac{1(2)(3)}{6} = 1$$ Base case

$$\frac{(n+1)(n+2)(2n+3)}{6} = \frac{(n^2+3n+2)(2n+3)}{6} = \frac{2n^3+6n^2+4n+3n^2+9n+6}{6}$$

$$= \frac{2n^3+9n^2+13n+6}{6}$$

$$\sum_{k=1}^{n+1} \cancel{(k+1)^2}\, k^2 = \sum_{k=1}^{n} k^2 + 2\cancel{k}+1 + (n+1)^2$$

$$= \sum_{k=1}^{n} k^2 + \sum_{k=1}^{n} 2k + \sum_{k=1}^{n} 1$$

$$= \frac{n(n+1)(2n+1)}{6} + n(n+1) + n = \frac{n(n+1)(2n+1)}{6} + n^2 + 2n = \frac{2n^3+3n^2+n}{6} + \frac{6n^2+12n}{6}$$

$$= \frac{2n^3+9n^2+13n+}{6}$$

4. What is the running time of the following algorithm?

F(n)
- **for** $i \leftarrow 1$ **to** n **do** — $c_1\, n$
- **for** $j \leftarrow 1$ **to** n **do** — $c_2\, n^2$
- *temp* $\leftarrow$ *temp* $+ i \cdot j$ — $c_3\, n^2$
- **return** *temp*

$$T(n) = \Theta(n^2)$$ ✓

hyposis

$$\sum_{k=1}^{m} k^2 = \frac{m(m+1)(2m+1)}{6}$$

$$\sum_{k=1}^{m+1} k^2 = \sum_{k=1}^{m} k^2 + (m+1)^2$$ ✓

$$\frac{(n^2+n)(2n+1)}{6} = \frac{2n^3+3n^2+n}{6}$$

5. Write a program, using pseudocode or the programming language of your choice, to compute the mean value of a set of n numbers supplied as input.

```
MEAN (A, n)
  j ← 0
  for i = 1 to n
      j ← j + A[n]
  return (j/n)
```

This *exit survey* will not count as part of your grade in this class, it is being administered in order to determine the current state of your knowledge. The results will be used to access how our curriculum is preparing you, and may factor in future curriculum changes.
For each question you may answer **I don't know how to solve it, I know how to solve it, but I forgot**, or **I know how to solve it, and here's what I think the solution is**.

Name:

EECE 331 Data Structures. Exit Survey

1. Given a coin in which the probability of heads is $\frac{1}{4}$ and the probability of tails is $\frac{3}{4}$, what tis the expected number of heads in an experiment involving three coin tosses?

$$E[H = h] = \boxed{\frac{3}{4}} \left(\frac{1}{4} + \frac{1}{4} + \frac{1}{4}\right)$$

2. A bottle contains five marbles numbered 1–5. How many different ways are there to select two balls from the bottle? If two marbles are selected at random, what is the probability that the balls numbered 1 and 2 are selected?

a) $\binom{5}{2} = ?$

b) $2\left(\frac{1}{5} \cdot \frac{1}{4}\right)$

two ways this can happen

Student 4

3. Use induction to prove the following: $\sum_{k=1}^{n} k^2 = \frac{n(n+1)(2n+1)}{6}$.

For $k=1$

Basis

$$\sum_{k=1}^{1} k^2 = \frac{1(1+1)(2(1)+1)}{6} = \frac{2\cdot 3}{6} = 1 \checkmark$$

for $n' = n+1$

$$\sum_{k=1}^{n'} k^2 = \frac{n(n+1)(2n+1)}{6} + (n+1)^2$$

$$= \frac{n(n+1)(2n+1)}{6} + n^2 + 2n + 1$$

$$= \frac{n(n+1)(2n+1) + 6n^2 + 12n + 6}{6}$$

$$= \frac{(n^2+n)(2n+1) + 6n^2 + 12n + 6}{6}$$

$$= \frac{2n^3 + n^2 + 2n^2 + n + \ldots}{6}$$

$$= \frac{2n^3 + 9n^2 + 13n + 6}{6}$$

$$= \frac{(n+1)(n+2)(2n+3)}{6}$$

$$= \frac{n'(n'+1)(2n'+1)}{6}$$

4. What is the running time of the following algorithm?

F(n)
for $i \leftarrow 1$ **to** n **do**
  for $j \leftarrow 1$ **to** n **do**
    temp $\leftarrow$ *temp* $+ i \cdot j$
return *temp*

$\Theta(n^2)$

5. Write a program, using pseudocode or the programming language of your choice, to compute the mean value of a set of n numbers supplied as input.

```
MEAN(A, len)
  temp ← 0
  for i = 1, len
      do temp ← temp + A[i]
  return temp / len
```

This *exit survey* will not count as part of your grade in this class, it is being administered in order to determine the current state of your knowledge. The results will be used to access how our curriculum is preparing you, and may factor in future curriculum changes.
For each question you may answer **I don't know how to solve it, I know how to solve it, but I forgot**, or **I know how to solve it, and here's what I think the solution is.**

Name:

EECE 331 Data Structures. Exit Survey

1. Given a coin in which the probability of heads is $\frac{1}{4}$ and the probability of tails is $\frac{3}{4}$, what tis the expected number of heads in an experiment involving three coin tosses?

$$p(h,3) = \frac{1}{4}^{3} \cdot \frac{3}{4}^{0} = \frac{1}{64}$$

$$\frac{3}{4} \; \frac{1}{4}$$

Forgot

2. A bottle contains five marbles numbered 1–5. How many different ways are there to select two balls from the bottle? If two marbles are selected at random, what is the probability that the balls numbered 1 and 2 are selected?

$$\binom{5}{2} = \frac{5!}{3!\,2!} = 10$$

$$p(1 \& 2) = 1/10 \doteq 10\%$$

Student 5

$$\begin{cases} f(1) = 1 \\ f(n) = n^2 + f(n-1) \end{cases}$$

3. Use induction to prove the following: $\sum_{k=1}^{n} k^2 = \frac{n(n+1)(2n+1)}{6}$.

base; $n(1)$ $\quad 1 = \frac{6}{6}$ ✓

$\cancel{\frac{k^2(k^2+1)(2k^2+1)}{6}}$

$\frac{(n^2+n)(2n+1)}{6} = \frac{2n^3+3n^2+n}{6}$

✓

$$n^2 + \frac{(n-1)(n)(2n-1)}{6} = \frac{(n^2-n)(2n-1)}{6}$$

$$= \frac{6n^2 + 2n^3 - 3n^2 + n}{6}$$

$$= \frac{(n+1)n(2n+1)}{6}$$

✓

4. What is the running time of the following algorithm?

```
F(n)
    for i ← 1 to n do
        for j ← 1 to n do
            temp ← temp + i · j
    return temp
```

$O(n^2)$ ✓

5. Write a program, using pseudocode or the programming language of your choice, to compute the mean value of a set of n numbers supplied as input.

```
temp ← 0
for i = 0 → n-1
    temp ← temp + Num[i]

mean ← temp / n
```

This *exit survey* will not count as part of your grade in this class, it is being administered in order to determine the current state of your knowledge. The results will be used to access how our curriculum is preparing you, and may factor in future curriculum changes.
For each question you may answer **I don't know how to solve it, I know how to solve it, but I forgot**, or **I know how to solve it, and here's what I think the solution is.**

Name:

EECE 331 Data Structures. Exit Survey

1. Given a coin in which the probability of heads is $\frac{1}{4}$ and the probability of tails is $\frac{3}{4}$, what tis the expected number of heads in an experiment involving three coin tosses?

   X 3 heads

2. A bottle contains five marbles numbered 1–5. How many different ways are there to select two balls from the bottle? If two marbles are selected at random, what is the probability that the balls numbered 1 and 2 are selected?

   Permutations $= \binom{5}{2}$ ✓

   $$p = \frac{\binom{5}{1}\binom{4}{1}}{\binom{5}{2}} \quad X$$

Student 6

3. Use induction to prove the following: $\sum_{k=1}^{n} k^2 = \frac{n(n+1)(2n+1)}{6}$.

Base Case: $n=1$

$$\sum_{K=1}^{1} K^2 = 1 = \frac{1(1+1)(2+1)}{6} = \frac{6}{6} = 1$$

IH: assume it is true for $n=m$

$$\sum_{K=1}^{m} K^2 = \frac{m(m+1)(2m+1)}{6}$$

Need to prove for $n = m+1$

$$\sum_{K=1}^{m+1} K^2 = \frac{(m+1)(m+2)(2m+3)}{6}$$

$$\sum_{K=1}^{m+1} K^2 = (m+1)^2 + \sum_{K=1}^{m} K^2$$

$$(m+1)^2 + \frac{m(m+1)(2m+1)}{6}$$

$$= \frac{6(m+1)^2 + m(m+1)(2m+1)}{6}$$

$$= \frac{(m+1)(6(m+1) + m(2m+1))}{6}$$

$$= \frac{(m+1)(6m+6+2m^2+1)}{6}$$

$$= \frac{(m+1)(2m^2+6m+7)}{6}$$

$$= \frac{(m+1)(m+2)(2m+3)}{6}$$

$$= \frac{(m+1)(m+2)(2m+3)}{6}$$

4. What is the running time of the following algorithm?

```
F(n)                                        Cost
    for i ← 1 to n do                       n-1
        for j ← 1 to n do                   n(n-1)
            temp ← temp + i · j             n^2
    return temp
```

Time $= n-1 + n(n-1) + n^2 = \Theta(n^2)$

5. Write a program, using pseudocode or the programming language of your choice, to compute the mean value of a set of n numbers supplied as input.

Mean (A) Assume n= length[A]

1. sum ← 0
2. for i = 1 to n
3. do sum ← A[n] + sum
4. mean = sum/n
5. return mean.

This *exit survey* will not count as part of your grade in this class, it is being administered in order to determine the current state of your knowledge. The results will be used to access how our curriculum is preparing you, and may factor in future curriculum changes.
For each question you may answer **I don't know how to solve it, I know how to solve it, but I forgot,** or **I know how to solve it, and here's what I think the solution is.**

Name:

EECE 331 Data Structures. Exit Survey

1. Given a coin in which the probability of heads is $\frac{1}{4}$ and the probability of tails is $\frac{3}{4}$, what tis the expected number of heads in an experiment involving three coin tosses?

$\frac{1}{4} \times 3 = \frac{3}{4} < 1$ $\qquad \phi$ ~~Heads~~

2. A bottle contains five marbles numbered 1–5. How many different ways are there to select two balls from the bottle? If two marbles are selected at random, what is the probability that the balls numbered 1 and 2 are selected?

10 ways to select 2 balls

Probability of 1 & 2 is $\frac{1}{10}$

Student 7

3. Use induction to prove the following: $\sum_{k=1}^{n} k^2 = \frac{n(n+1)(2n+1)}{6}$.

Base case ?

$$\sum_{k=1}^{n} k^2 = \sum_{k=1}^{n-1} k^2 + n^2 = \frac{(n-1)(n)(2n-1)}{6} + n^2$$

$$= \frac{(n)(2n^2-3n+1)}{6} + 6n^2$$

$$= \frac{2n^3-3n^2+1+6n^2}{6}$$

$$= \frac{n(2n^2+3n+1)}{6} = \frac{n(n+1)(2n+1)}{6}$$

4. What is the running time of the following algorithm?

```
F(n)
    for i ← 1 to n do            Θ(n)
        for j ← 1 to n do        Θ(n)
            temp ← temp + i · j  Θ(1)
    return temp
```

$\Theta(n^2)$ ✓

5. Write a program, using pseudocode or the programming language of your choice, to compute the mean value of a set of n numbers supplied as input.

```
MEAN (A)
temp ← 0
for i ← 1 to n
    temp ← temp + A[i]
return temp /n
```

This *exit survey* will not count as part of your grade in this class, it is being administered in order to determine the current state of your knowledge. The results will be used to access how our curriculum is preparing you, and may factor in future curriculum changes.
For each question you may answer **I don't know how to solve it, I know how to solve it, but I forgot**, or **I know how to solve it, and here's what I think the solution is.**

Name:

EECE 331 Data Structures. Exit Survey

1. Given a coin in which the probability of heads is $\frac{1}{4}$ and the probability of tails is $\frac{3}{4}$, what tis the expected number of heads in an experiment involving three coin tosses?

   25% probability for each toss
   So .25 x 3

2. A bottle contains five marbles numbered 1–5. How many different ways are there to select two balls from the bottle? If two marbles are selected at random, what is the probability that the balls numbered 1 and 2 are selected?

   well since there are marbles in the jar & not balls, the probability of getting a ball is 0. ~~Thats if~~ you wanna get technical if not, 5! + 4! ways

Student 8

3. Use induction to prove the following: $\sum_{k=1}^{n} k^2 = \frac{n(n+1)(2n+1)}{6}$.

I forgot how to do this.

4. What is the running time of the following algorithm?

```
F(n)
    for i ← 1 to n do        n
        for j ← 1 to n do    n
            temp ← temp + i · j
    return temp
```

running time is $\Theta(n^2)$

5. Write a program, using pseudocode or the programming language of your choice, to compute the mean value of a set of n numbers supplied as input.

```
i = 0

for  c = 0,  c ≤ n,  c ++ {
        i = i + input
     }
  i = i ÷ c
```

This *exit survey* will not count as part of your grade in this class, it is being administered in order to determine the current state of your knowledge. The results will be used to access how our curriculum is preparing you, and may factor in future curriculum changes.
For each question you may answer **I don't know how to solve it**, **I know how to solve it, but I forgot**, or **I know how to solve it, and here's what I think the solution is.**

Name:

EECE 331 Data Structures. Exit Survey

1. Given a coin in which the probability of heads is $\frac{1}{4}$ and the probability of tails is $\frac{3}{4}$, what tis the expected number of heads in an experiment involving three coin tosses?

umm... 0 or 1, depends how you want to round 3/4

X

2. A bottle contains five marbles numbered 1–5. How many different ways are there to select two balls from the bottle? If two marbles are selected at random, what is the probability that the balls numbered 1 and 2 are selected?

~~with or~~ without replacement?

$\binom{2}{5}$ ~~different~~ ways

0 and 0 since the bottle doesn't contain any balls.

Can't pull the wool over my eyes :) !

Student 9

3. Use induction to prove the following: $\sum_{k=1}^{n} k^2 = \frac{n(n+1)(2n+1)}{6}$.

no, thank you. I am horrible at induction and always botch it if I can't look at my notes. With notes I could solve this

4. What is the running time of the following algorithm?

```
F(n)
    for i ← 1 to n do                n
        for j ← 1 to n do            Σ_1^n j
            temp ← temp + i · j
    return temp
```

It looks like $O(n^2)$ish

5. Write a program, using pseudocode or the programming language of your choice, to compute the mean value of a set of n numbers supplied as input.

```
Function ( array )
  int temp = 0
  //loop through array
  for (i = 0 to arraySize -1)
  { temp += array [i] ; }
//optional int size = i;
double mean = temp / arraySize ;
```

- if you don't know the size of the array you can just check for null or something in the for loop and set the size afterwards

This *exit survey* will not count as part of your grade in this class, it is being administered in order to determine the current state of your knowledge. The results will be used to access how our curriculum is preparing you, and may factor in future curriculum changes.
For each question you may answer **I don't know how to solve it, I know how to solve it, but I forgot,** or **I know how to solve it, and here's what I think the solution is.**

Name: [redacted]

EECE 331 Data Structures. Exit Survey

1. Given a coin in which the probability of heads is $\frac{1}{4}$ and the probability of tails is $\frac{3}{4}$, what tis the expected number of heads in an experiment involving three coin tosses?

3 tosses

$E = 3\left(\frac{1}{4}\right) = \frac{3}{4}$ heads in three tosses

Every toss is a $\frac{1}{4}$ chance of heads

$\frac{1}{64}$ of 3 heads in a row

So after 3 tosses you would expect $\frac{3}{4}$ Heads and $(3 - \frac{3}{4}) = \frac{9}{4}$ tails because Tails is 3 times as likely

2. A bottle contains five marbles numbered 1–5. How many different ways are there to select two balls from the bottle? If two marbles are selected at random, what is the probability that the balls numbered 1 and 2 are selected?

n choose k
5 choose 2

$\left(\frac{n!}{(n-k)!\,k!}\right) = \frac{5!}{(3!)(2!)} = \frac{5 \cdot 4}{2} = \boxed{10 \text{ ways to select 2 marbles}}$

Either in order 1, 2 or 2, 1

Probability of marbles 1 and 2
pick 1 then 2

$\frac{1}{1-5} \quad \frac{1}{2-5} = \frac{1}{5} \cdot \frac{1}{4} = \frac{1}{20}$

$\frac{1}{1-5} \quad \frac{1}{1,3-5} = \frac{1}{5} \cdot \frac{1}{4} = \frac{1}{20}$

pick 2 then 1

$\frac{1}{20} + \frac{1}{20} = \frac{1}{10}$

$\boxed{\frac{1}{10} \text{ chance of picking numbers 1 and 2}}$

Student 10

understands the steps — just didn't get the details correct

3. Use induction to prove the following: $\sum_{k=1}^{n} k^2 = \frac{n(n+1)(2n+1)}{6}$.

$$\sum_{K=1}^{n} K^2 = \frac{n(n+1)(2n+1)}{6}$$

Base Case K=1

$K=1;\ K^2 = 1^2 = 1;\quad \frac{1(1+1)(2+1)}{6} = \frac{6}{6} = 1$

Assume for K+1

$$(K+1)^2 = \frac{(n+1)(n+2)(2n+3)}{6}$$

$$K^2+2K+1 = \frac{(n^2+3n+2)(2n+3)}{6}$$

$$K^2+2K+1 = \frac{(n^2+3n+2)(2n+3)}{6}$$

$$K^2+2K+1 = \frac{(2n^3+3n^2+6n^2+6)}{6}$$

$$K^2+2K+1 = \frac{(2n^3+9n^2+6)}{6}$$

$$\cancel{6}K^2+12K+\cancel{6} = 2n^3+9n^2+\cancel{6}$$

$$6K(K+2) = n^2(2n+9)$$

~~Not~~ Leading anywhere

4. What is the running time of the following algorithm?

```
F(n)
1    for i ← 1 to n do           O(n)
2       for j ← 1 to n do        O(n)
3          temp ← temp + i · j   O(1)
4    return temp
```

Run time $= O(n^2) + c$

$= O(n^2)$

5. Write a program, using pseudocode or the programming language of your choice, to compute the mean value of a set of n numbers supplied as input.

$$// \; mean = \frac{n + (n-1) + (n-2) + \ldots 1}{n}$$

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

int main ()
{

  int mean, n, i, temp, m;          scanf (n);
  m=n;
   For (i=0; i<n; i++)                /* Because n
     {                                   needs to be
        temp = m + temp;                 inputted by user */
        m--;
     }

   mean = temp/n;

 printf ("The mean is %f", mean)

return 0;

}
```

/* Logically I set m=n to hold its value. Then kept adding the values of m to temp to get $(n + (n-1) + (n-2) + \ldots + 1)$ then divided that value by n */