Announcements

1. Sign your integrity forms and email them to eceefifteen@gmail.com (else you get a 0 in your homeworks).
2. Test script
Test Script

- After you finish a problem (or all the problems), you need to run a “test script”.
- `./test$.sh`

It basically compares the outputs you get to the TA solutions so that you get a chance to fix them.

Read [https://piazza.com/class/i4k27q6ftpz6rt?cid=7](https://piazza.com/class/i4k27q6ftpz6rt?cid=7) and [https://piazza.com/class/i4k27q6ftpz6rt?cid=10](https://piazza.com/class/i4k27q6ftpz6rt?cid=10)
Test Script

PASSING THE TEST SCRIPT DOES NOT MEAN YOU GET 100% ON YOUR HOMEWORK.
#include <stdio.h>

int main()
{
    int x, y;
    x = 5, y = 10;
    ans = x+y;

    printf("--> %d\n", ans);
    return 0;
}
Are you sure the program will compile?
Find the output

```c
#include <stdio.h>

int main()
{
    int x, y ans;
    x = 5, y = 10;
    ans = x+y;

    printf(“--> %d\n”, ans);
    return 0;
}
```
Are there any errors? If so, fix them.

```c
#include <stdio.h>
int main()
{
    int a = 10, b, c;
    printf("--> a = %d\n");

    b = a/3;
    printf("--> %d\n");

    c = c + 1;
    printf("--> %d\n")
    return 0;
}
```
```c
#include <stdio.h>
int main()
{
    int a = 10, b, c;
    printf("--> a = %d\n", a);

    b = a/3;
    printf("--> %d\n", b);

    c = c + 1;
    printf("--> %d\n", c);
    return 0;
}
```
Now find the output
#include <stdio.h>
int main()
{
    int a = 10,b,c;
    printf("--= a = %d
",a); // a = 10

    b = a/3;
    printf("--= %d
",b); // b = 3

    c = c + 1; // NOTE ‘c’ was never initialized, so c = c+1
               // is just a random value!
    printf("--= %d
",c); // random value
    return 0;
}
Integer Division

Only quotient, no remainder!

\( \frac{3}{4} = 0 \)

\( 45/9 = 5 \)

\( 67/47 = 1 \)
Integer Division

Only quotient, no remainder!

\[
\frac{3}{4} = ?
\]

\[
45/9 = ?
\]

\[
67/47 = ?
\]
Modulo operator

$x \% y \rightarrow$ gives the remainder of $x/y$.

Try:
3%4?
45%9?
67%47?
Modulo operator

$x\%y \rightarrow$ gives the remainder of $x/y$.

Try:
$3\%4? \text{ ANS: 3}$
$45\%9? \text{ ANS: 0}$
$67\%47? \text{ ANS: 20}$
Modulo operator

3498\%10 = ??
349\%10 = ??
# Truth tables

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>A &amp; B</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
<td>0</td>
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<td>1</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>A</th>
<th>B</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>A</th>
<th>( \overline{A} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
Truth Tables

```c
int x = 9, y = 1, z = 0, ans;

ans = x || y;
ans = x && --y;
ans = (x+y) && z;
```