Rechnerstrukturen: Übungsblatt 3

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2. Juni 2020

Aufgabe 3

```c
int bool_or(int x, int y)
{
  return bis(x, y);
}

int bool_xor(int x, int y)
{
  return bis(bic(x, y), bic(y, x));
}
```

Aufgabe 5

```c
#include <stdio.h>

int count_bits(unsigned int x)
{
  unsigned int i = 0;
  while (x)
  {
    i = i + (x & 1);
    x = x >> 1;
  }
  return i;
}

int main(void)
{
  unsigned int x, y;
  printf("Enter x: ");
  scanf("%d", &x);
  printf("Enter y: ");
  scanf("%d", &y);

  unsigned int result = (unsigned int)(x & ~y) | (~x & y);
  printf("Result: %d\n", result);
  printf("Number of bits: %d\n", count_bits(result));
  return result;
}
```

Aufgabe 7

```
1  unsigned rotate_left(unsigned x, int n)
2  {
3    return (x << (4 * n)) | (x >> (sizeof(unsigned) - (4 * n)));
4  }
5
6  unsigned rotate_right(unsigned x, int n)
7  {
8    return (x >> (4 * n)) | (x << (sizeof(unsigned) - (4 * n)));
9  }
```