6 Arithmetic and Logic Instructions

- Unpacked = 4 0s out front
- Packed = no 0s out front, more effecient.
  - However, there are reasons for having 0000s out front
  - Could process nibble, instead of byte by byte
  - Makes processing easier
- BCD addition **does not** work.. kind of.
- `DA` takes into account the `AC` as well.
  - If `AC` $= 1$ or > 9, add $06H$
  - If `CY` $= 1$ or > 9, add $60H$.
- The extra `B` in `SUBB` mean subtracted with borrow.
  - Make sure to set clear `CY` before using `SUBB`
- One special case, divide by zero: `OV` $= 1$, values remain the same.
  - Division example: `A` $= 9$, `B` $= 5$
- `XRL` only works for 8 bits.
  - Same addressing modes as for `ANL`
- Compliment works for `A`, `C` or *anything* that is bit addressable.
- `CJNE` **changes the CY flag**
- Serial Communication example (we use RLC because we want to use the Carry flag for transmitting data)

```
ORG 0

MOV A, #35H
MOV P2, #0
MOV R0, #8
```