ATmega328PB environment setup

1 gcc

The gcc that comes inside AVR 8-bit Toolchain[1] misses some files that are needed to successfully compile binary for ATmega328PB. These files are included in Atmel ATmega Series Device Support Packs[2]. Unpack (actually it is a zip archive) and extract the following files:

```
./gcc/dev/atmega328pb/avr5/libatmega328pb.a
./gcc/dev/atmega328pb/avr5/crtatmega328pb.o
./include/avr/iom328pb.h
```

Move first two files to a directory `./avr/lib/avr5/` relative to toolchain. And header file to a directory `./avr/include/avr/` inside the toolchain.

2 avrdude

To program ATmega328PB use `m328pb` instead of `m328p` in avrdude command line (switch `-p`). So if you're using USBASP as programmer run

```
avrdude -c usbasp -p m328pb -B 5 -U flash:w:test.hex
```

In case the program returns `AVR Part "m328pb" not found.`, open `avrdude.conf` and find lines

```
part parent "m328"
        id = "m328p";
        desc = "ATmega328P";
        signature = 0x1e 0x95 0x0F;

        ocdrev = 1;
;
```

After single semicolon in a line, append the following.

```
part parent "m328"
        id = "m328pb";
        desc = "ATmega328PB";
        signature = 0x1e 0x95 0x16;

        ocdrev = 1;
;
```

Note the last semicolon.

Written on Friday 28th December, 2018.

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[1] https://www.microchip.com/mplab/avr-support/avr-and-arm-toolchains-c-compilers
[2] http://packs.download.atmel.com/