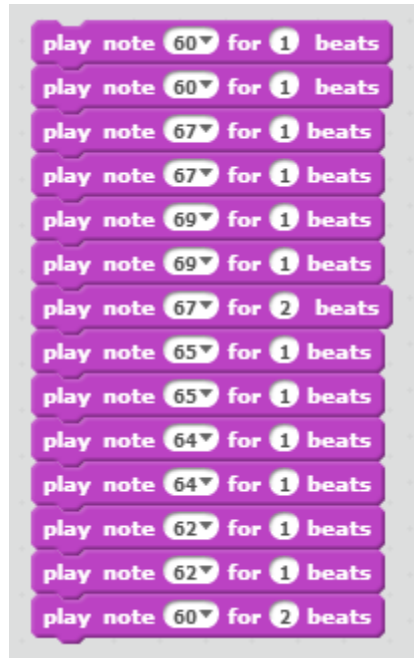**Advanced Music Notesheet**   Name:_____
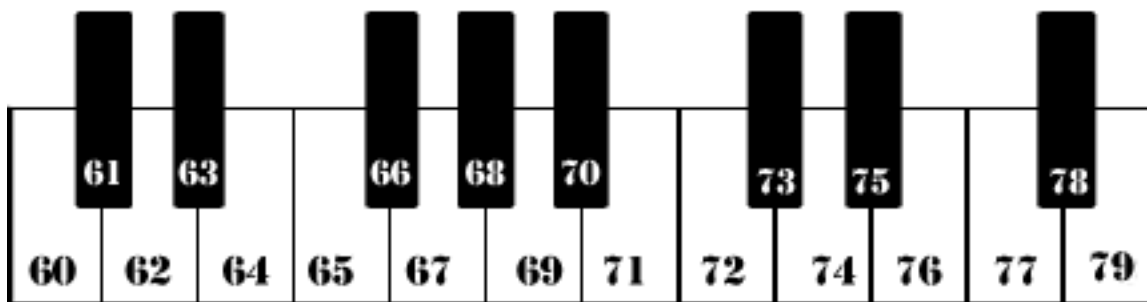
Sheet Music in Scratch

- You can write sheet music in Scratch using the "play note" block and the "rest" block.
- The following music can be written in the following script.

Twin-kle,   twin-kle   lit - tle   star,   How I   won-der   what you   are.


```
play note 60 for 1 beats
play note 60 for 1 beats
play note 67 for 1 beats
play note 67 for 1 beats
play note 69 for 1 beats
play note 69 for 1 beats
play note 67 for 2 beats
play note 65 for 1 beats
play note 65 for 1 beats
play note 64 for 1 beats
play note 64 for 1 beats
play note 62 for 1 beats
play note 62 for 1 beats
play note 60 for 2 beats
```

- The music follows the beats that are written in the music, with the quarter note having a length of one beat.
- The notes are in increments of half steps, and Scratch defines 60 as middle C. This results in the following arrangement of notes.

(The notes go higher than 79, and lower than 60. This is just an example of how the keyboard is numbered in Scratch)

Try filling in the code for "Mary had a Little Lamb"

Polyphonic Music in Scratch

- Multiple melodic and harmonic lines can be written in Scratch.
- By using the "when flag is clicked" and the "broadcast" blocks you can create music that will play at the same time.
  NOTE: Sometimes they will get off-beat. Try using a combination of flag and broadcast for this, or give all of the parts the same rhythm.
- The following code is the beginning of "Phantom of the Opera"

- Try making your own polyphonic music. You can use different instruments to make ensemble pieces.