TELL TIME

Create an algorithm in any form to "telltime" from a "non-digital" clock which has 2 hands, a big one and a small one (both having integer values ranging from 1 to 12, indicating which value each hand is on, or has passed). The inputs are $b$ and $s$ (big and small, from 1 to 12). The output is one of the following four forms:

- h O'clock
- half past h
- m minutes after h
- m minutes before h

where $m$ and $h$ are the required minutes and hours.

But first, show some test values.

First show some test values:

- $b = 12$ with $s = 1$ to 12
- $b = 12, s = 7$
- $b = 6$ with $s = 1$ to 12
- $b = 6, s = 7$
- $b = 1$ to 5 with $s = 1$ to 12
- $b = 3, s = 7$
- $b = 7$ to 12 with $s = 1$ to 11
- $b = 7, s = 11$
- $b = 7$ to 12 with $s = 12$ Surprize!  
- $b = 7, s = 12$
// Does tell Time

int big, small; // hands of clock
// int mins, hrs ; // minutes, hours

big = 7; small = 12;

if (big == 12) {
    System.out.println(small + " O'clock");
} else if (big == 6) {
    System.out.println("Half past " + small);
} else if (big < 6) {
    System.out.println(5*big + " mins after " + small);
} else if (small == 12) { // NOTE WELL !!!
    System.out.println(60 - 5*big + " mins before " + 1);
} else {
    //mins before = (60 - 5*big)
    System.out.println(60 - 5*big + " mins before " + (small + 1));
} // end if

// Does Tell Time
// Tests exhaustively (almost)

int big, small; // hands of clock

for (big = 1; big <= 12; big++) {
    for (small = 2; small <= 12; small += 2) {
        // Insert rest here
    } // end big hand
} // end small hand