**Solution to how to find root without build-ins**

Just use x^2=n

Then if x^2-n=0 you have a number that has an integer root

**Array 2 dimensional: matrix**

**Page 4**

1.

Remember column first, row last

Matrix[2][1] = 7;

HOWEVER: when creating arrays with multiple rows, it starts with rows, no need to name column

Int[][] x={{1,2,3}, {4,5}, {6}}

Go down to the 3rd, go right to the 2nd

2.

Write int[] [] whatevernameIwantforarray = {

}

**Page 6 example2**

2 loops are used

The x.length on line 4 means 3, which counts {1,2,3}, {4,5}, {6} – in other words the number of rows

It doesn’t search the length of columns but it can search the length of rows

Java class 6

**Exmaple11 try this:**

public static void main (string[] args);

int[] deck = new int [52]; 🡨 what this does: open up 52 spaces for my new array

String[] suits = {spade…}

String[]ranks = {2,3…}

for (int i =0; i<deck.length; ++i) deck[i] = I 🡨 what this does: just put them in order, so 1=1, 2=2

for(int i =0; i<deck.length; ++i) {

int j= (int)(Math.random() \* deck.length);

int tmp = deck[i];

deck[i] = deck[j];

deck[j] = tmp;

}

🡨 what this does: make order shuffled

For (int I =0; i<=4, ++i) { 🡨 this is to draw the first 5, guaranteed no overlaps

String suit = suits[deck[i] / 13];

String rank = ranks[deck[i] % 13];

System.out.printf(“whatever here”)

}

My version: