**Answers:**

**Part A:** Color the box GREEN if the given number is a perfect square and RED if it is not.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | 1) |  |  |  | 2) |  |
|  | 3) |  |  |  | 4) |  |
|  | 5) |  |  |  | 6) |  |

**Part B:** Find the value of the following.

|  |  |  |  |
| --- | --- | --- | --- |
| 1) |  | 2) |  |
| 3) |  | 4) |  |
| 5) |  | 6) |  |
| 7) |  | 8) |  |
| 9) |  | 10) |  |

**Part C:** Find two consecutive integers between which lies.

The radicand is 66.

The closest perfect square number

less than 66 is 64.

The closest perfect square number

greater than 66 is 81.

The square root of is between 8 and 9.

**Part D:** Find two rational numbers with two decimal places between which lies.

Since 66 is between 64 and 81, must be between and 65

By estimation, we have:

**So, lies between 8.1 and 8.2.**

|  |
| --- |
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To find the two rational numbers with two decimal places between which lies, let’s estimate further:

**So, lies between 8.12 and 8.13.**

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| --- |
|  |
|  |
|  |

The square root of is between

**Part E:** Approximate up to the fourth estimate.

Since 66 is between 64 and 81, must be between and

Step 1: The integer closest to is 8.

The first estimate is 8.

Step 2: Divide the radicand by the first estimate.

Step 3: To find the second estimate, find the average of the quotient in Step 2 and the first estimate.

The second estimate is 8.125.

Step 4: Repeat Step 2. But this time, divide the radicand by the second estimate.

Step 5: To find the third estimate, repeat Step 3. This time, find the average of the quotient in Step 4 and the second estimate.

The third estimate is 8.124.

Step 6: Repeat Step 2. But this time, divide the radicand by the third estimate.

Step 5: To find the fourth estimate, repeat Step 3. This time, find the average of the quotient in Step 4 and the third estimate.

The closest approximate of is 8.1235.