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## Worksheet 3.3 Extra Practice

1. Fill in the blanks.

The first step in estimating the square root of a number that is not a perfect square is to think of the $\qquad$
$\qquad$ less than and greater than the number.
2. Complete the table. The first row is done for you.

| Number | Perfect <br> Square <br> Less Than <br> the <br>  <br> its Factors | Perfect <br> Square <br> Greater <br> Than the <br>  <br> its Factors | Perfect <br> Square <br> Number Is <br> Closer To | Estimate <br> the <br> Square <br> Root | Check in <br> square root <br> Calculator <br> (nearest <br> thousandth) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 33 | $25=5 \times 5$ | $36=6 \times 6$ | 36 | $\sqrt{33}$ | 5.745 |
| 11 |  |  |  |  |  |
| 47 |  |  |  |  |  |
| 6 |  |  |  |  |  |
| 70 |  |  |  |  |  |
| 116 |  |  |  |  |  |

3. Complete the table.

|  | Perfect <br> Square <br> Less Than <br> the Number | Perfect <br> Square <br> Greater Than <br> the Number | Perfect <br> Square <br> Number Is <br> Closer To | Estimate | Check <br> (nearest <br> thousandth) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\sqrt{14}$ |  |  |  |  |  |
| $\sqrt{38}$ |  |  |  |  |  |
| $\sqrt{140}$ |  |  |  |  |  |
| $\sqrt{94}$ |  |  |  |  |  |

4. Identify all of the possible whole numbers with a square root greater than 3 and less than 4.
5. The square has an area of $10 \mathrm{~cm}^{2}$.

a) Use perfect squares to estimate the side length of the square, to one decimal place. Show your work.
b) Use a ruler to measure the side length of the square, to the nearest tenth of a centimetre. $\qquad$
