

Name: _____

Date: _____

Math 9 Section 1.2 Square Roots of Non Perfect Squares

1. Given each of the following non-perfect squares, find the PS that is closest to it:

| | | | |
|-------|--------|--------|--------|
| a) 23 | b) 129 | c) 91 | d) 115 |
| e) 91 | f) 385 | g) 75 | h) 186 |
| i) 57 | j) 228 | k) 391 | l) 513 |

2. Estimate the following roots and draw it on a number line:

| | | |
|-----------------|-----------------|-----------------|
| a) $\sqrt{18}$ | b) $\sqrt{38}$ | c) $\sqrt{93}$ |
| d) $\sqrt{73}$ | e) $\sqrt{29}$ | f) $\sqrt{58}$ |
| g) $\sqrt{118}$ | h) $\sqrt{168}$ | i) $\sqrt{288}$ |

3. Approximate each of the following square roots:

| | | |
|---------------------------|---------------------------|---------------------------|
| a) $\sqrt{\frac{17}{26}}$ | b) $\sqrt{\frac{10}{37}}$ | c) $\sqrt{\frac{99}{65}}$ |
|---------------------------|---------------------------|---------------------------|

| | | |
|----------------------------|-----------------------------|-----------------------------|
| d) $\sqrt{\frac{120}{79}}$ | e) $\sqrt{\frac{195}{167}}$ | f) $\sqrt{\frac{101}{290}}$ |
|----------------------------|-----------------------------|-----------------------------|

4. Use any strategy to estimate the value of each square root. Try to find a common factor to estimate the roots.

| | | |
|-----------------------------|---------------------------|-----------------------------|
| a) $\sqrt{\frac{17}{1000}}$ | b) $\sqrt{\frac{18}{60}}$ | c) $\sqrt{\frac{27}{40}}$ |
| d) $\sqrt{\frac{10}{45}}$ | e) $\sqrt{\frac{21}{65}}$ | f) $\sqrt{\frac{529}{100}}$ |
| g) $\sqrt{0.000080}$ | h) $\sqrt{0.0119}$ | i) $\sqrt{0.0257}$ |
| j) $\sqrt{2.90}$ | k) $\sqrt{0.0145}$ | l) $\sqrt{0.000626}$ |