

$$x^2 + 8x + 7$$

$$(x+4)^2 = -7 + 4^2$$

$$x+4 = \sqrt{9}$$

$$187+9=196$$

$$1 \ 2 \ 3$$

$$x^2 + 2x + 3$$

$$(x+1)^2 = -3+1$$

$$(x+1)^2 = -2$$

how far the
closest whole
root is

$$(x+1)(x+2)$$

$$x^2 + 3x + 2$$

$$(x+\frac{3}{2})^2 = -2 + 2.25$$

$$x = \pm\sqrt{-2} - 1$$

$$11.5 \approx \sqrt{-2.25}$$

$$\begin{array}{r} 107 \\ 107 \\ \hline 749 \\ 10700 \\ \hline 11449 \end{array}$$

$$11449$$

$$(100)^2 + 2 \cdot 100 \cdot 14 + 49 \cdot 100$$

$$\sqrt{289}$$

$$100 + 140 + 49$$

$$1 \cdot 10^2 + 14 \cdot 10^1 + 49 \cdot 10^0$$

$$100 + 140 + 49$$

$$289$$

$$\sqrt{289} = 17$$

$$\sqrt{11449}$$

$$= 17 \text{ base } 100$$

$$17 \sqrt{100} = 1 \cdot 100 + 7 \cdot 100$$