

8. We need  $-0.01 \leq \sqrt{2x+3} - 3 \leq 0.01$ . Thus

$$2.99 \leq \sqrt{2x+3} \leq 3.01$$

$$8.9401 \leq 2x+3 \leq 9.0601$$

$$2.97005 \leq x \leq 3.03005$$

$$3 - 0.02995 \leq x - 3 \leq 0.03005.$$

Here  $\delta = 0.02995$  will do.