

$$x^2 - 5000.002x + 10$$

$$5000.002 \pm \sqrt{(5000.002)^2 - 4(10)}$$

2

$$5000.002 \pm \sqrt{29999980}$$

2

$$x_1 = 5000$$

$$x_2 = 0.002$$

$$a) \quad x^2 - 5000.002x + 10$$

$$a = 1$$

$$b = -5000.0$$

$$c = 10$$

$$x' = \frac{-(-5000) \pm \sqrt{(-5000)^2 - 4(1)(10)}}{2(1)}$$

$$= \frac{5000 \pm \sqrt{(-5000)^2 - 40}}{2}$$

$$\frac{5000 \pm 4999.9}{2}$$

$$x_1' = 4999.9 \quad x_2' = 0.05$$

$$\xi_+ = \frac{|x_1 - x_1'|}{x_1} \cdot 100\% = \frac{5000 - 4999.9}{5000} \cdot 100\% = 0.02\%$$

$$\xi_+ = \frac{|x_2 - x_2'|}{x_2} \cdot 100\% = \frac{0.002 - 0.05}{0.002} \cdot 100\% = 2400\%$$

$$6) x^2 - 5,000.002x + 10$$

$$a = 1$$

$$b = -5,000$$

$$c = 10$$

$$x' = \frac{-2c(10)}{-5,000 \pm \sqrt{5,000^2 - 4(1)(10)}}$$

$$= \frac{-20}{-5,000 \pm \sqrt{2.5 \cdot 10^7 - 40}}$$

$$= \frac{-20}{-5,000 \pm 1999.9}$$

$$x_1' = 200, \quad x_2' = 0.002$$

$$\xi_+ = \frac{|x_1 - x_1'|}{x_1} \cdot 100\% = \frac{5000 - 200}{5000} \cdot 100\% = 96\%$$

$$\xi_+ = \frac{|x_2 - x_2'|}{x_2} \cdot 100\% = \frac{0.002 - 0.002}{0.002} \cdot 100\% = 0\%$$