

$$\text{III) } P = 12000$$

$$Q = 15000$$

$$P1 = \frac{12000 \times 3}{100} = 360$$

$$12000 + 360 = 12360$$

$$\mathbf{P1 = 12360}$$

$$P2 = \frac{12360 \times 3}{100} = 370.8$$

$$12360 + 370.8 = 12730.8$$

$$\mathbf{P2 = 12730.8}$$

$$Q1 = \frac{15000 \times 2}{100} = 300$$

$$15000 + 300 = 15300$$

$$\mathbf{Q1 = 15300}$$

$$Q2 = \frac{15300 \times 2}{100} = 306$$

$$15300 + 306 = 15606$$

$$\mathbf{Q2 = 15606.}$$

$$Q2 = \boxed{} = 306$$

$$15300 + 306 = 15606$$

$$\mathbf{Q2 = 15606}$$

II)

$$1) \quad 9x^2 + 6x + 5 = 0$$

$$a=9 ; b=6 ; c=5$$

$$\Delta = b^2 - 4ac$$

$$\Delta = 6^2 - 4 \times 9 \times 5$$

$$\Delta = 36 - 180$$

$$\Delta = -144$$

$\Delta < 0$, donc il n'y a pas de solution.

$$2) \quad x + 0.2 = 30x^2$$

$$-30x^2 + x + 0.2 = 0$$

$$A = -30; b = 1; c = 0.2$$

$$\Delta = 1^2 - 4 \times (-30) \times 0.2$$

$$\Delta = 1 + 24$$

$$\Delta = 25$$

$\Delta > 0$, donc l'équation à deux solutions notées x_1 et x_2 .

$$x_1 = \frac{-1 - \sqrt{25}}{2 \times (-30)} = \frac{-6}{-60} = 0.1$$

$$x_2 = \frac{-1 + \sqrt{25}}{2 \times (-30)} = \frac{4}{-60}$$

$$S = \{0.1; 4/(-60)\}$$

$$3) \quad 2x^2 - 1 - 2x\sqrt{2} = 0$$

$$A = 2; b = -2\sqrt{2}; c = -1$$

$$\Delta = (-2\sqrt{2})^2 - 4 \times 2 \times (-1)$$

$$\Delta = -4 + 8$$

$$\Delta = 4$$

$\Delta > 0$, donc l'équation à deux solutions.

$$x_1 = \frac{2\sqrt{2} - \sqrt{4}}{2 \times 2} = 0$$

$$x_2 = \frac{2\sqrt{2} + \sqrt{4}}{2 \times 2} = \frac{4}{4} = 1$$

$$S = \{0; 1\}$$