

Fiche n° 15. Systèmes linéaires

Réponses

15.1 a) $\{(3, 1)\}$

15.1 b) $\{(7, 2)\}$

15.1 c) $\left\{\left(\frac{1}{3}, \frac{2}{3}\right)\right\}$

15.1 d) $\left\{\left(\frac{\sqrt{2}}{3}, \frac{\sqrt{2}}{2}\right)\right\}$

15.2 a) $\left\{\left(1 - \frac{a}{4}, -\frac{1}{2} + \frac{3}{8}a\right)\right\}$

15.2 b) $(2, -3)$

15.2 c) $\left\{\left(\frac{1}{13}a + \frac{5}{13}a^2, \frac{2}{13}a - \frac{3}{13}a^2\right)\right\}$

15.2 d) $(a - 2a^2, a + a^2)$

15.3 a) $\{(1 + z, -z, z) ; z \in \mathbb{R}\}$

15.3 b) $\{(1, y, 3 + 2y) ; y \in \mathbb{R}\}$

15.3 c) $\left\{\left(\frac{13}{6} - \frac{5}{3}z, -\frac{1}{3} + \frac{4}{3}z, z\right) ; z \in \mathbb{R}\right\}$

15.3 d) $\left\{\left(x, \frac{-5}{12} - \frac{3}{2}x, \frac{-25}{24} - \frac{7}{4}x\right) ; x \in \mathbb{R}\right\}$

15.4 a) $\{(2, -1, 3)\}$

15.4 b) $\{(-1, 4, 2)\}$

15.4 c) $\emptyset$

15.4 d) $\left\{\left(-\frac{2}{7} - z, \frac{3}{7}, z\right) ; z \in \mathbb{R}\right\}$

15.5 a) $\{(1, 1/2, 1/2)\}$

15.5 b) $\emptyset$

15.5 c) $\{(5z, 1 - 4z, z) ; z \in \mathbb{R}\}$

15.5 d) $\left\{\left(1, \frac{1}{a+2}, \frac{1}{a+2}\right)\right\}$

15.6 a) $\{(5, 3, -1)\}$

15.6 b) $\emptyset$

15.6 c) .. $\left\{\left(\frac{a^2 + a - 1}{a^3 - 1}c, \frac{a^2 - a + 1}{a^3 - 1}c, \frac{-a^2 + a + 1}{a^3 - 1}c\right)\right\}$

15.7 a) $\{(0, 0, 0)\}$

15.7 b) $\{(x, y, -x - y) ; (x, y) \in \mathbb{R}^2\}$

15.7 c) $\{(x, x, x) ; x \in \mathbb{R}\}$