

Dire se i seguenti insiemi, normali rispetto all'asse x , sono normali anche rispetto all'asse y ed eventualmente descriverli come tali.

1. $E = \{(x, y) \in \mathbf{R}^2 \mid 0 \leq x \leq 1, 0 \leq y \leq 3x\};$
2. $E = \{(x, y) \in \mathbf{R}^2 \mid 0 \leq x \leq 2, 0 \leq y \leq x^2\};$
3. $E = \{(x, y) \in \mathbf{R}^2 \mid -1 \leq x \leq 1, 0 \leq y \leq \sqrt{1-x^2}\};$
4. $E = \{(x, y) \in \mathbf{R}^2 \mid 0 \leq x \leq \pi, 0 \leq y \leq \sin x\};$
5. $E = \{(x, y) \in \mathbf{R}^2 \mid -4 \leq x \leq 4, \sqrt{|x|} \leq y \leq 4 - \sqrt{|x|}\};$
6. $E = \{(x, y) \in \mathbf{R}^2 \mid 0 \leq x \leq 1, 0 \leq y \leq 1 - \sqrt{1-x^2}\} \cup \{(x, y) \in \mathbf{R}^2 \mid 1 \leq x \leq 2, 0 \leq y \leq \sqrt{1-(x-1)^2}\};$
7. $E = \{(x, y) \in \mathbf{R}^2 \mid 0 \leq x \leq 2\pi, 0 \leq y \leq 2 + \sin x\};$
8. $E = \{(x, y) \in \mathbf{R}^2 \mid 0 \leq x \leq 2, 0 \leq y \leq 2x - x^2\};$
9. $E = \{(x, y) \in \mathbf{R}^2 \mid 0 \leq x \leq 2, 2x - x^2 \leq y \leq 4x - 2x^2\};$
10. $E = \{(x, y) \in \mathbf{R}^2 \mid -1 \leq x \leq 1, x^5 \leq |y| \leq x^3\};$
11. $E = \{(x, y) \in \mathbf{R}^2 \mid -1 \leq x \leq 2, \frac{1}{3}x(4-x) + \frac{5}{3} \leq y \leq 2x - x^2 + 3\}.$

Dire se i seguenti insiemi sono normali rispetto all'asse x e/o rispetto all'asse y ed eventualmente descriverli come tali.

1. $E = \{(x, y) \in \mathbf{R}^2 \mid x^2 + y^2 \leq 1\};$
2. $E = \{(x, y) \in \mathbf{R}^2 \mid x^2/a^2 + y^2/b^2 \leq 1\} \quad a, b > 0;$
3. $E = \{(x, y) \in \mathbf{R}^2 \mid -4 \leq x \leq 4, \sqrt{|x|} \leq y \leq 5 - \sqrt{|x|}\};$
4. $E = \{(x, y) \in \mathbf{R}^2 \mid x^2 + y^2 \geq 1, x \geq 0, y \geq 0\} \cap \{(x, y) \in \mathbf{R}^2 \mid x^2 + y^2 \leq 4, x \geq 0, y \geq 0\};$
5. $E = \{(x, y) \in \mathbf{R}^2 \mid x^2 + y^2 \geq 1, x \geq 0\} \cap \{(x, y) \in \mathbf{R}^2 \mid x^2/4 + y^2 \leq 4, x \geq 0, y \geq 0\};$
6. $E = \{(x, y) \in \mathbf{R}^2 \mid |x| + |y| \leq 1\}.$