Some exercises in Arithmetic
A.A. 22/23

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Esercizio 0.1.

1. *Find the equation of the line for the points* $A : (1, 4)$, $B : (2, -1)$.
2. *Find the equation of the line for the points* $A : (1, 4)$, $B : (1, -1)$.
3. *Find the equation of the line for the points* $A : (4, 4)$, $B : (2, 2)$.

Esercizio 0.2.

1. *Find if possible the equation of the parabola for the points* $A : (1, 4)$, $B : (2, -1)$, $C : (2, 5)$, *and then draw it.*
2. *Find if possible the equation of the parabola for the points* $A : (1, 4)$, $B : (-1, 0)$, $C : (3, 8)$, *and then draw it.*
3. *Find if possible the equation of the parabola for the points* $A : (0, 1)$, $B : (1, -1)$, $C : (2, 5)$, *and then draw it.*

Esercizio 0.3.

1. *Draw the lines* $r_1 : x + 4y - 2 = 0$, $r_2 : 2x - 2y - 2 = 0$, $r_3 : -x - 3y - 2 = 0$, $r_4 : -x + 3y - 4 = 0$.
2. *Draw the lines* $r_1 : y = 3x - 1$, $r_2 : y = x$, $r_3 : y = -x$, $r_4 : -y = 2x + 1$.

Esercizio 0.4.

1. *Draw the parabolas* $\gamma_1 : y = x^2 + 4x + 4$, $\gamma_2 : y = x^2 + 4x$, $\gamma_3 : y = x^2 + 4x + 8$, $\gamma_4 : y = -x^2 + 4x + 4$.
2. *Draw the parabolas* $\gamma_1 : y = x^2 + 3x + 4$, $\gamma_2 : y = x^2 - 4 - 1x$, $\gamma_3 : y = -x^2 + 3x + 8$, $\gamma_4 : y = -x^2 + 5x - 4$.

Esercizio 0.5.

1. *Draw the circles* $\gamma_1 : (x - 1)^2 + (y + 1)^2 = 1$, $\gamma_2 : x^2 + y^2 + 2x + 2y + 2 = 4$.

Esercizio 0.6.

1. *Draw the hyperbolae* $\gamma_1 : xy = 1$, $\gamma_2 : xy = -1$, $\gamma_3 : xy = 4$.