Esercizi tabulari sulle iperboli

completa la seguente tabella sulle iperboli con i fuochi sull'asse x, usando solo i dati in grassetto

	Equazione	*Asintoti*	*Distanza focale*	*Eccentricità*	*Centro*
1	$\mathbf{x^2-4x-25y^2+20y-9=0}$	$x-5y=0$ $x+5y=4$	$\frac{6\sqrt{26}}{5}$	$\frac{\sqrt{26}}{5}$	$\left(2,\frac{2}{5}\right)$
2	$49x^2+98x-9y^2+18y-60=0$	$\mathbf{7x-3y=-10}$ $\mathbf{7x+3y=-4}$	$\mathbf{\frac{20\sqrt{58}}{21}}$	$\frac{\sqrt{58}}{3}$	$(-1,1)$
3	$\mathbf{4x^2-32x-36y^2+36y+19=0}$	$2x-6y=5$ $2x+6y=11$	$2\sqrt{10}$	$\frac{\sqrt{10}}{3}$	$\left(4,\frac{1}{2}\right)$
4	$x^2-2x-y^2+2y-9=0$	$x-y=0$ $x+y=2$	$\mathbf{6\sqrt{2}}$	$\mathbf{\sqrt{2}}$	$\mathbf{(1,1)}$
5	$\mathbf{9(y^2+y-x^2+5x)=50}$	$x-y=3$ $x+y=2$	$\frac{4\sqrt{2}}{3}$	$\sqrt{2}$	$\left(\frac{5}{2},-\frac{1}{2}\right)$
6	$\mathbf{(8x-7y)(8x+7y)=28y+53}$	$8x-7y=2$ $8x+7y=-2$	$\frac{\sqrt{113}}{4}$	$\frac{\sqrt{113}}{7}$	$\left(0,-\frac{2}{7}\right)$
7	$25x^2-40x-64y^2+64y-25=0$	$5x-8y=0$ $5x+8y=8$	$\mathbf{\frac{\sqrt{89}}{4}}$	$\mathbf{\frac{\sqrt{89}}{8}}$	$\mathbf{\left(\frac{4}{5},\frac{1}{2}\right)}$
8	$9x^2+24x-4y^2-40y-88=0$	$3x-2y=6$ $3x+2y=-14$	$\mathbf{\frac{2\sqrt{13}}{3}}$	$\mathbf{\frac{\sqrt{13}}{2}}$	$\mathbf{\left(-\frac{4}{3},-5\right)}$
9	$\mathbf{25(y^2-2y+1)=(x+1)(x-1)}$	$x-5y=-5$ $x+5y=5$	$\frac{2\sqrt{26}}{5}$	$\frac{\sqrt{26}}{5}$	$(0,1)$
10	$4x^2+4x-16y^2+32y-31=0$	$\mathbf{2x-4y=-5}$ $\mathbf{2x+4y=3}$	$\mathbf{2\sqrt{5}}$	$\frac{\sqrt{5}}{2}$	$\left(-\frac{1}{2},1\right)$
11	$\mathbf{\left(\frac{1}{3}-3y\right)\left(\frac{1}{3}+3y\right)=8y+6x-x^2}$	$3x-9y=13$ $3x+9y=5$	$\frac{16\sqrt{10}}{9}$	$\frac{\sqrt{10}}{3}$	$\left(3,-\frac{4}{9}\right)$
12	$x^2+12x-y^2-20y-89=0$	$\mathbf{x-y=4}$ $\mathbf{x+y=-16}$	$\mathbf{10\sqrt{2}}$	$\sqrt{2}$	$(-6,-10)$
13	$\mathbf{y^2-\frac{4}{9}x^2+2\sqrt{2}x=\frac{7}{2}}$	$\frac{2x}{3}-y=\frac{3\sqrt{2}}{2}$ $\frac{2x}{3}+y=\frac{3\sqrt{2}}{2}$	$\sqrt{13}$	$\frac{\sqrt{13}}{3}$	$\left(\frac{9\sqrt{2}}{4},0\right)$
14	$16x^2-48\sqrt{2}x-9y^2-18y-37=0$	$\frac{4x}{3}-y=2\sqrt{2}+1$ $\frac{4x}{3}+y=2\sqrt{2}-1$	$\mathbf{\frac{25}{3}}$	$\mathbf{\frac{5}{3}}$	$\mathbf{\left(\frac{3\sqrt{2}}{2},-1\right)}$
15	$25(x^2-y^2)+30\sqrt{3}x+2=0$	$\mathbf{x-y=-\frac{3\sqrt{3}}{5}}$ $\mathbf{x+y=-\frac{3\sqrt{3}}{5}}$	$\mathbf{2\sqrt{2}}$	$\sqrt{2}$	$\left(-\frac{3\sqrt{3}}{5},0\right)$

completa la seguente tabella sulle iperboli con i fuochi sull'asse y, usando solo i dati in grassetto

	Equazione	*Fuochi*	*Semiasse trasverso*	*Semiasse non trasverso*	*Eccentricità*
16	$\mathbf{16x^2+32x-9y^2+18y+8=0}$	$F_1\left(-1,\frac{7}{12}\right)$ $F_2\left(-1,\frac{17}{12}\right)$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{5}{4}$

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17	$\mathbf{9x^2-27x-4y^2-10y+23=0}$	$F_1\left(\frac{3}{2},-\frac{5+2\sqrt{13}}{4}\right)$ $F_2\left(\frac{3}{2},\frac{-5+2\sqrt{13}}{4}\right)$	$\frac{3}{2}$	1	$\frac{\sqrt{13}}{3}$
18	$49x^2-14x-4y^2-8y-2=0$	$\mathbf{F_1\left(\frac{1}{7},-\frac{\sqrt{53}}{14}-1\right)}$ $\mathbf{F_2\left(\frac{1}{7},\frac{\sqrt{53}}{14}-1\right)}$	$\mathbf{\frac{1}{2}}$	$\frac{1}{7}$	$\frac{\sqrt{53}}{7}$
19	$9x^2+6x-25y^2+10y+36=0$	$\mathbf{F_1\left(-\frac{1}{3},\frac{1-2\sqrt{34}}{5}\right)}$ $\mathbf{F_2\left(-\frac{1}{3},\frac{1+2\sqrt{34}}{5}\right)}$	$\frac{6}{5}$	**2**	$\frac{\sqrt{34}}{3}$
20	$x^2+8x-y^2+32=0$	$\mathbf{F_1(-4,-4\sqrt{2})}$ $\mathbf{F_2(-4,4\sqrt{2})}$	4	4	$\mathbf{\sqrt{2}}$
21	$\mathbf{\left(y-\frac{4}{5}x\right)\left(\frac{4}{5}x+y\right)=\frac{41+24x}{25}+\frac{4}{5}y}$	$F_1\left(-\frac{3}{4},\frac{4-3\sqrt{41}}{10}\right)$ $F_2\left(-\frac{3}{4},\frac{4+3\sqrt{41}}{10}\right)$	$\frac{6}{5}$	$\frac{3}{2}$	$\frac{\sqrt{41}}{4}$
22	$\mathbf{(3x+3)^2=49(y^2-2y)}$	$F_1\left(-1{,}1-\frac{\sqrt{58}}{3}\right)$ $F_2\left(-1{,}1+\frac{\sqrt{58}}{3}\right)$	1	$\frac{7}{3}$	$\frac{\sqrt{58}}{3}$
23	$16x^2-8x-9y^2-54y+64=0$	$\mathbf{F_1\left(\frac{1}{4},-8\right)}$ $\mathbf{F_2\left(\frac{1}{4},2\right)}$	**4**	3	$\frac{5}{4}$
24	$45y\left(\frac{5y}{8}+1\right)-2(4x^2+891)=0$	$\mathbf{F_1\left(0,-\frac{89}{5}\right)}$ $\mathbf{F_2\left(0,\frac{81}{5}\right)}$	8	**15**	$\frac{17}{8}$
25	$9x^2+18x-4y^2+10=0$	$\mathbf{F_1\left(-1,-\frac{\sqrt{13}}{6}\right)}$ $\mathbf{F_2\left(-1,\frac{\sqrt{13}}{6}\right)}$	$\frac{1}{2}$	$\frac{1}{3}$	$\mathbf{\frac{\sqrt{13}}{3}}$
26	$\mathbf{16\left(x^2+\sqrt{6}x-y^2\right)=24y-31}$	$F_1\left(-\frac{\sqrt{6}}{2},-\sqrt{2}-\frac{3}{4}\right)$ $F_2\left(-\frac{\sqrt{6}}{2},\sqrt{2}-\frac{3}{4}\right)$	1	1	$\sqrt{2}$
27	$\mathbf{x^2-2x-9y^2+6(2y+1)=0}$	$F_1\left(1,\frac{2}{3}-\sqrt{10}\right)$ $F_2\left(1,\frac{2}{3}+\sqrt{10}\right)$	1	3	$\sqrt{10}$
28	$16x^2+64x-9y^2-6y+67=0$	$\mathbf{F_1\left(-2,-\frac{7}{6}\right)}$ $\mathbf{F_2\left(-2,\frac{1}{2}\right)}$	$\mathbf{\frac{2}{3}}$	$\frac{1}{2}$	$\frac{5}{4}$
29	$9x^2+18x-81y^2+36\sqrt{5}y+25=0$	$\mathbf{F_1\left(-1,\frac{2\sqrt{5}}{9}-\frac{2\sqrt{10}}{3}\right)}$ $\mathbf{F_2\left(-1,\frac{2\sqrt{5}}{9}+\frac{2\sqrt{10}}{3}\right)}$	$\frac{2}{3}$	**2**	$\sqrt{10}$
30	$3x^2-2\sqrt{6}x-27y^2-36y-7=0$	$\mathbf{F_1\left(\frac{\sqrt{6}}{3},-\frac{2+\sqrt{10}}{3}\right)}$ $\mathbf{F_2\left(\frac{\sqrt{6}}{3},\frac{-2+\sqrt{10}}{3}\right)}$	$\frac{1}{3}$	1	$\mathbf{\sqrt{10}}$